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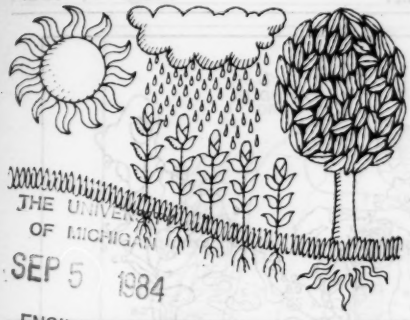


THE UNIVERSITY OF MICHIGAN
SEP 5 1984
ENGINEERING

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

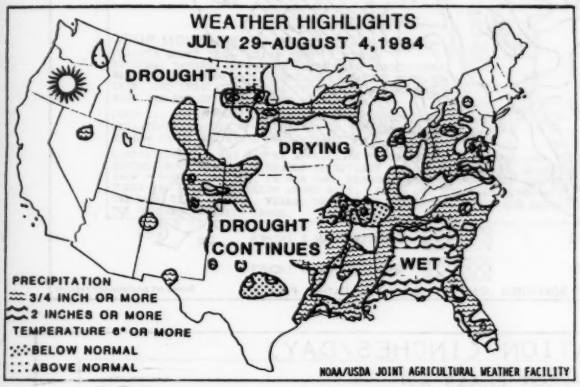
U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

Volume 71, No. 31 WASHINGTON, D.C. Aug. 7, 1984

The University of Michigan Engineering Library

National Weather Summary

July 29 to Aug. 4



HIGHLIGHTS: Accumulations of rain were heavy over most of the Southeast, and moderate in parts of the mid-Atlantic States. In the West moderate showers fell in the central High Plains and along a line from the border of the Dakotas to the central Great Lakes. The Corn Belt had little or no rain. Most of the rain fell in the eastern end. Average temperatures were cooler than normal through the southern part of the Nation, and warmer than normal along the northern tier of States, especially the northern Plains.

SUNDAY...Showers and thunderstorms covered the eastern gulf coast and the Atlantic coast to the mid-Atlantic States. The heaviest rain fell from the western Florida Panhandle to the Piedmont of the Carolinas. Showers were over the Rockies, and very light showers fell in Montana and North Dakota. Morning temperatures were cool in the Northeast and Midwest, but afternoon temperatures exceeded 100 degress in parts of Montana and North Dakota.

MONDAY...Moderate to heavy rain fell in the Southeast and light showers fell from southern California into the central Rockies. Relatively cool weather continued over most of the East, but afternoon highs topped 90 degrees in the central and northern Plains and exceeded 100 degrees in the interior of California.

TUESDAY...Showers were generally light in the Southeast but some moderate amounts fell in parts of Georgia. Light showers covered the western Plateau and mountains with moderate amounts along the high Plains from New Mexico to Nebraska. The East remained cool. Afternoon highs were in the nineties through parts of the Plains, and near 100 degrees through California and in the Northwest.

WEDNESDAY...Showers and thunderstorms covered the eastern States from southern Louisiana to New England. Showers also covered the High Plains from New Mexico and northern Texas into Montana. Widely scattered showers fell in parts of the southern and central Plains. High temperatures moderated in northern California but exceeded 100 degrees in parts of the Northwest.

THURSDAY...Showers and thunderstorms were predominatly light from the lower Mississippi Valley to western New York and to the east coast. Some heavy rain fell in Alabama and central Arkansas. Showers were scattered over the central Plateau and the Rockies. The drought area in Montana had some very light showers and heavier amounts reached into South Dakota.

FRIDAY...Showers were scattered through the lower and central Mississippi Valley, the southern Applachians, and from the eastern Great Lakes to southern New England. Light showers also fell through Texas and much of the northern Plains and Rockies.

SATURDAY...Showers fell from the lower Mississippi Valley to western New York, east to the southern Appalachians, and through the mid-Atlantic States to the coast. Light showers continued over the Rockies and were scattered in the eastern portion of the southern Plains and the central Plains. Some moderate rain fell in the upper Mississippi Valley.

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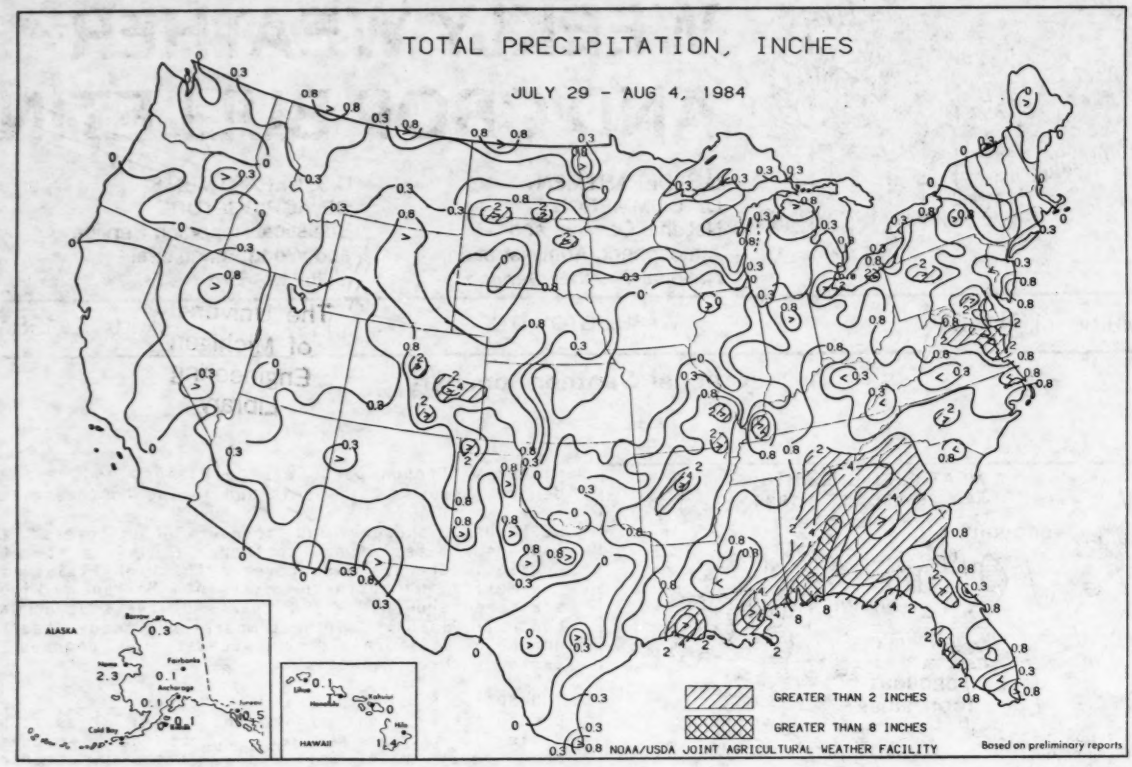
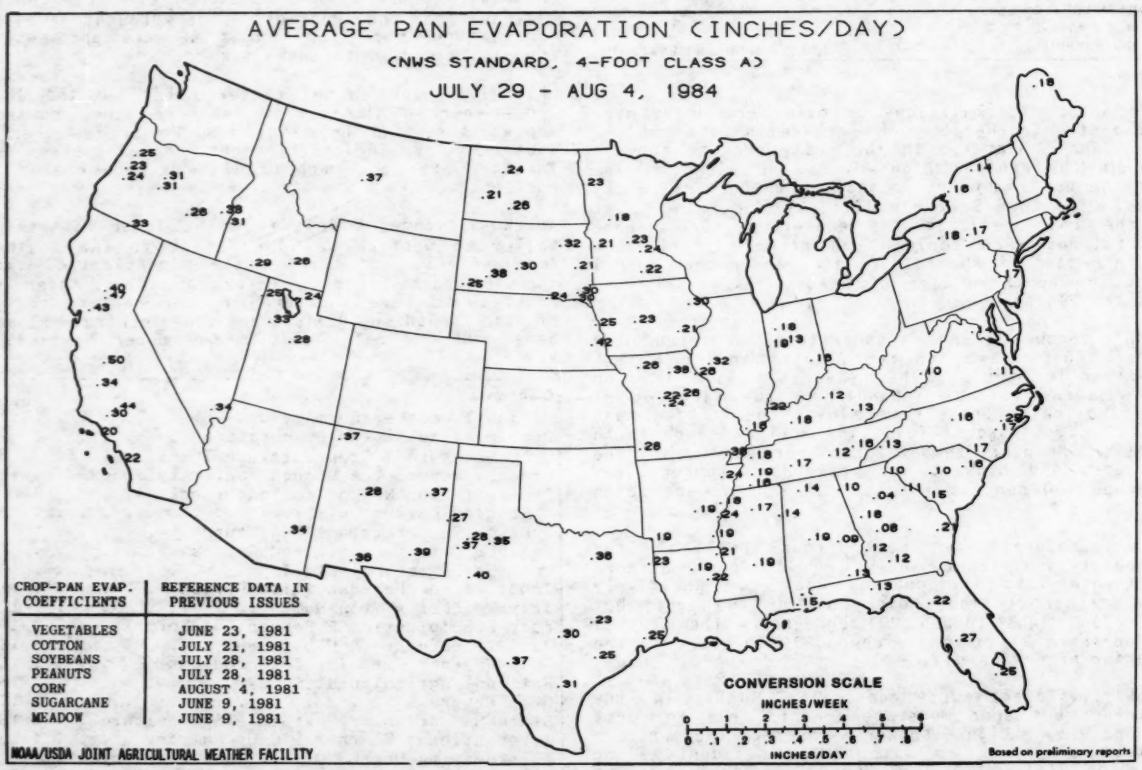
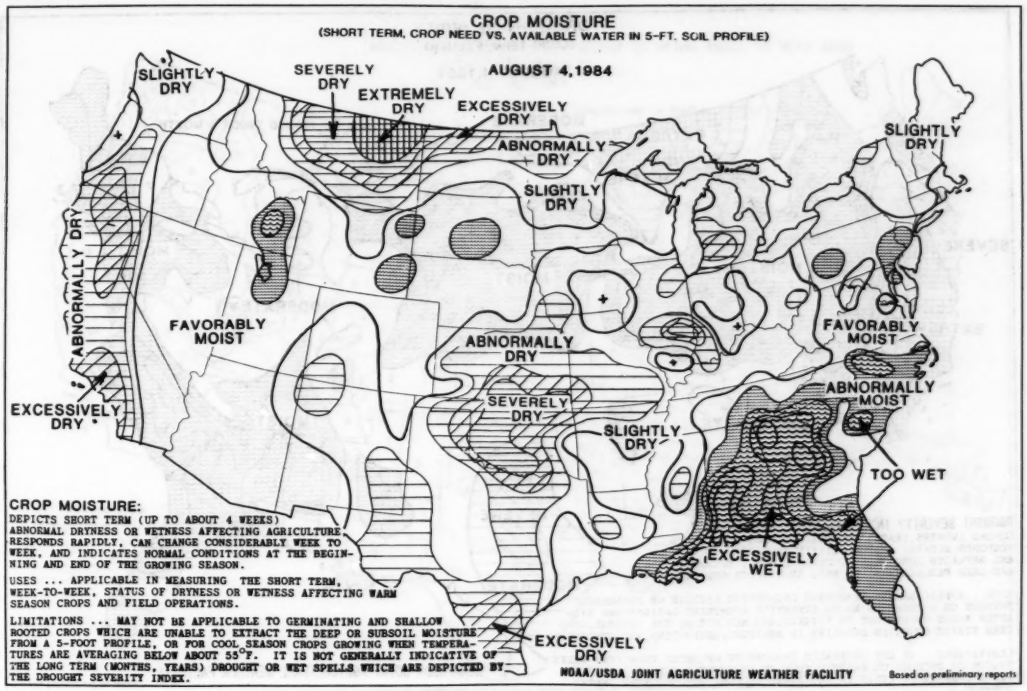
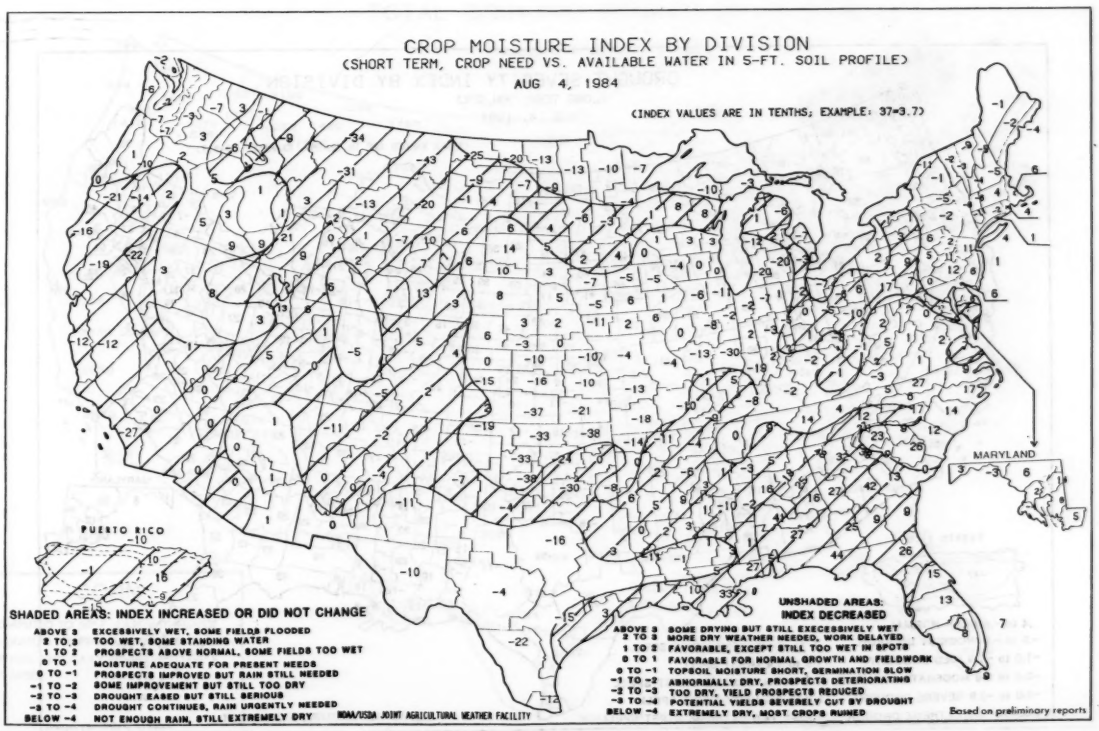
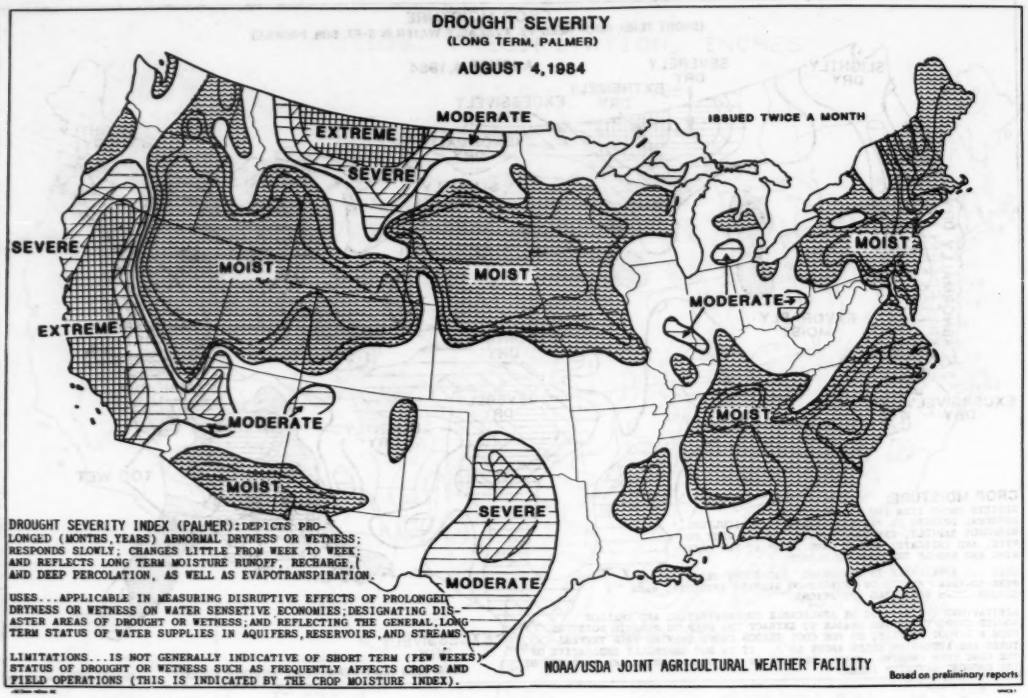
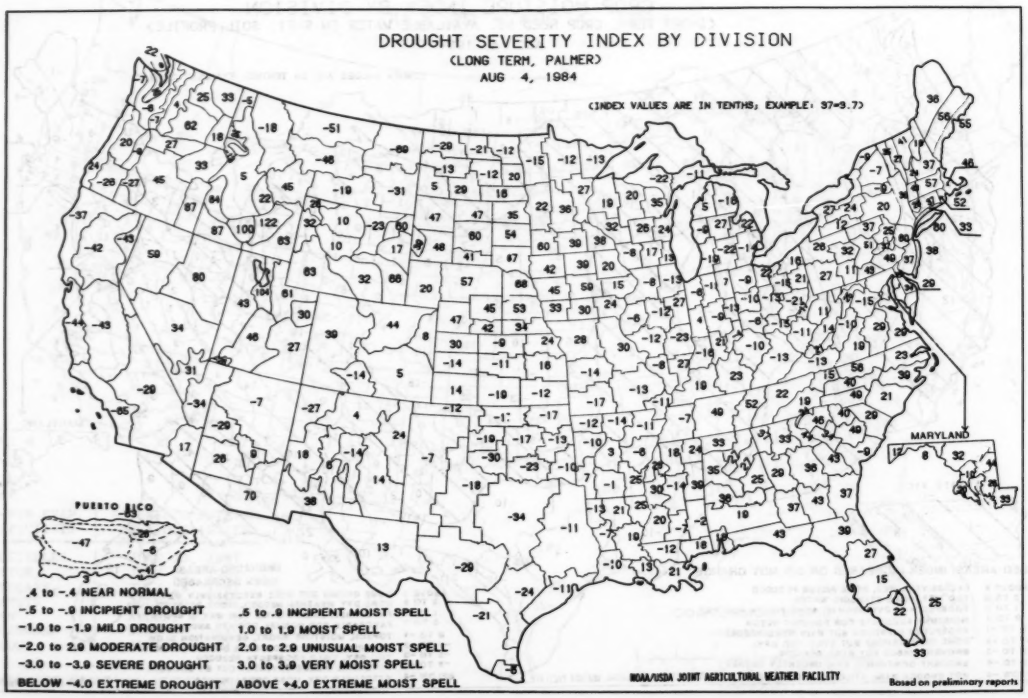

TOTAL PRECIPITATION, INCHES
JULY 29 - AUG 4, 1984
ALASKA
HAWAII
GREATER THAN 2 INCHES
GREATER THAN 8 INCHES
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

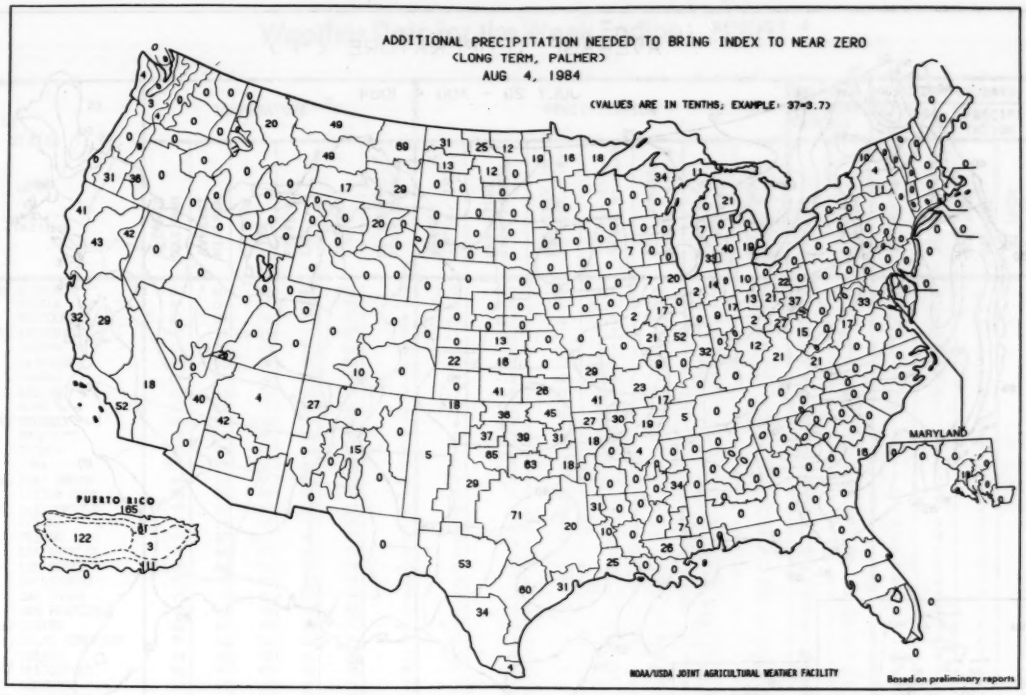

AVERAGE PAN EVAPORATION (INCHES/DAY)
(NWS STANDARD, 4-FOOT CLASS A)
JULY 29 - AUG 4, 1984
CROP-PAN EVAP. COEFFICIENTS | REFERENCE DATA IN PREVIOUS ISSUES
VEGETABLES | JUNE 23, 1981
COTTON | JULY 21, 1981
SOYBEANS | JULY 28, 1981
PEANUTS | JULY 28, 1981
CORN | AUGUST 4, 1981
SUGARCANE | JUNE 9, 1981
MEADOW | JUNE 9, 1981
CONVERSION SCALE
INCHES/WEEK
INCHES/DAY
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

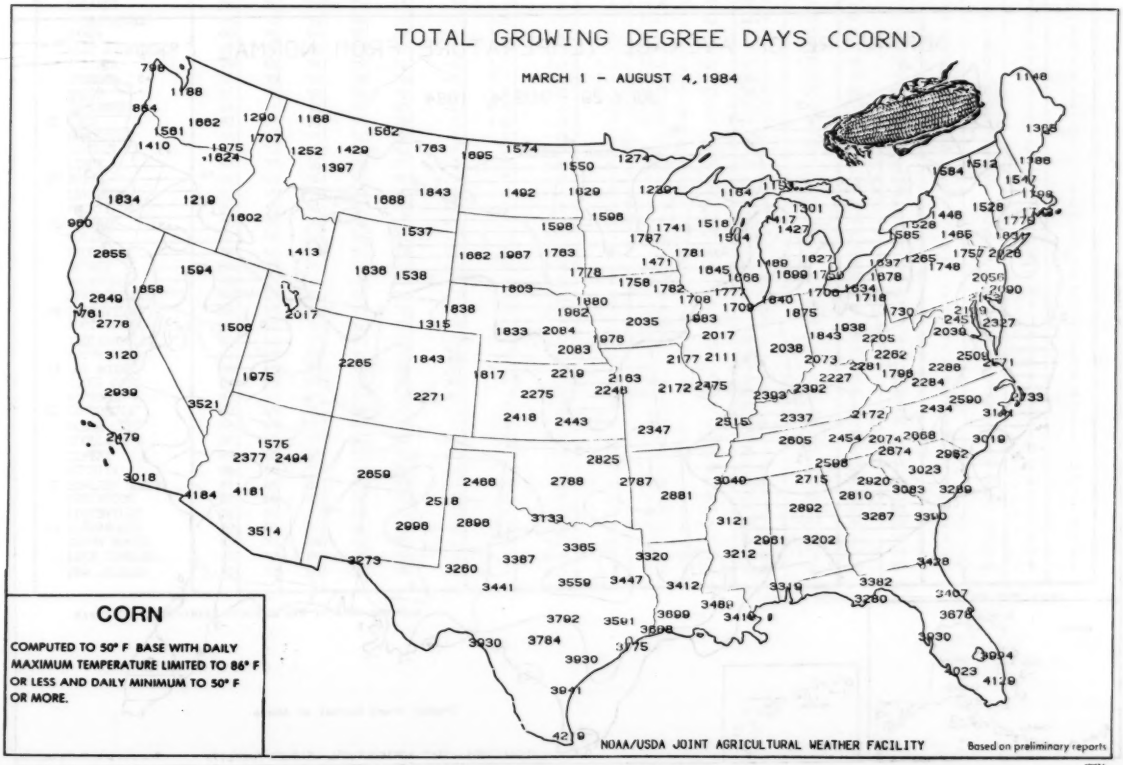

CROP MOISTURE
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
AUGUST 4,1984
SLIGHTLY DRY
SEVERELY DRY
EXTREMELY DRY
EXCESSIVELY DRY
ABNORMALLY DRY
SLIGHTLY DRY
SLIGHTLY DRY
ABNORMALLY DRY
FAVORABLY MOIST
EXCESSIVELY DRY
ABNORMALLY DRY
SEVERELY DRY
SLIGHTLY DRY
FAVORABLY MOIST
ABNORMALLY MOIST
TOO WET
EXCESSIVELY WET
EXCESSIVELY DRY
CROP MOISTURE:
DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.
USES ... APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.
LIMITATIONS ... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.
NOAA/USDA JOINT AGRICULTURE WEATHER FACILITY
Based on preliminary reports

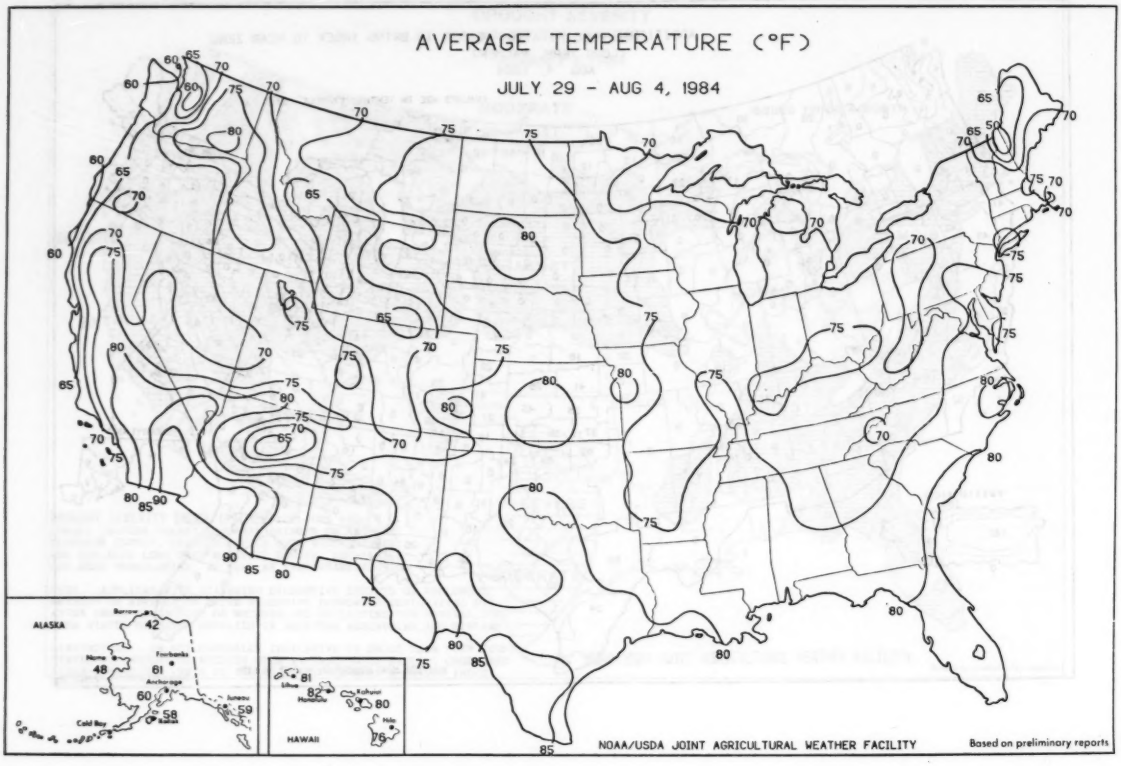

CROP MOISTURE INDEX BY DIVISION
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
AUG 4, 1984
(INDEX VALUES ARE IN TENTHS; EXAMPLE: 37=3.7)
MARYLAND
PUERTO RICO
SHADED AREAS: INDEX INCREASED OR DID NOT CHANGE
ABOVE 3 EXCESSIVELY WET, SOME FIELDS FLOODED
2 TO 3 TOO WET, SOME STANDING WATER
1 TO 2 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
0 TO 1 MOISTURE ADEQUATE FOR PRESENT NEEDS
0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2 SOME IMPROVEMENT BUT STILL TOO DRY
-2 TO -3 DROUGHT EASED BUT STILL SERIOUS
-3 TO -4 DROUGHT CONTINUES, RAIN URGENTLY NEEDED
BELOW -4 NOT ENOUGH RAIN, STILL EXTREMELY DRY
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
UNSHADED AREAS: INDEX DECREASED
ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3 MORE DRY WEATHER NEEDED, WORK DELAYED
1 TO 2 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1 TO -2 ABNORMALLY DRY, PROSPECTS DETERIORATING
-2 TO -3 TOO DRY, YIELD PROSPECTS REDUCED
-3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
BELOW -4 EXTREMELY DRY, MOST CROPS RUINED
Based on preliminary reports

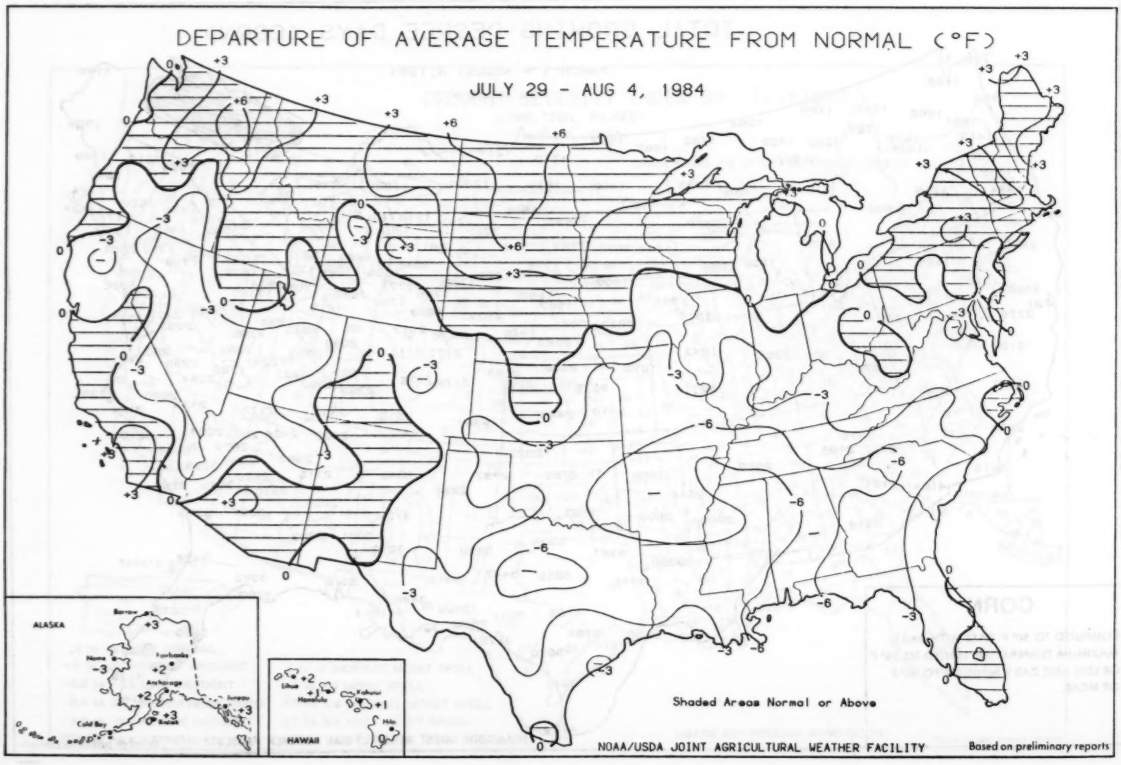

DROUGHT SEVERITY
(LONG TERM, PALMER)
AUGUST 4,1984
ISSUED TWICE A MONTH
MODERATE
EXTREME
SEVERE
SEVERE
MOIST
MOIST
MOIST
MODERATE
EXTREME
MODERATE
MOIST
MOIST
SEVERE
MODERATE
DROUGHT SEVERITY INDEX (PALMER):DEPICTS PRO-
LONGED (MONTHS,YEARS) ABNORMAL DRYNESS OR WETNESS;
RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK;
AND REFLECTS LONG TERM MOISTURE RUNOFF, RECHARGE,
AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED
DRYNESS OR WETNESS ON WATER SENSETIVE ECONOMIES;DESIGNATING DIS-
ASTER AREAS OF DROUGHT OR WETNESS;AND REFLECTING THE GENERAL,LONG
TERM STATUS OF WATER SUPPLIES IN AQUIFERS,RESERVOIRS,AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OF SHORT TERM (FEW WEEKS)
STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND
FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM, PALMER)
AUG 4, 1984
(INDEX VALUES ARE IN TENTHS; EXAMPLE: 37=3.7)
MARYLAND
PUERTO RICO
.4 to -.4 NEAR NORMAL
-.5 to -.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to 2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
.5 to .9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE +4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


ADDITIONAL PRECIPITATION NEEDED TO BRING INDEX TO NEAR ZERO
(LONG TERM, PALMER)
AUG 4, 1984
(VALUES ARE IN TENTHS; EXAMPLE: 37=3.7)
PUERTO RICO
MARYLAND
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


TOTAL GROWING DEGREE DAYS (CORN)
MARCH 1 - AUGUST 4, 1984
CORN
COMPUTED TO 50° F BASE WITH DAILY MAXIMUM TEMPERATURE LIMITED TO 86° F OR LESS AND DAILY MINIMUM TO 50° F OR MORE.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (°F)
JULY 29 - AUG 4, 1984
ALASKA
HAWAII
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
JULY 29 - AUG 4, 1984
ALASKA
HAWAII
Shaded Areas Normal or Above
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Weather Data for the Week Ending AUGUST 4

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 8	PCT. NORMAL SINCE June 8	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	80	68	88	66	74	-7	2.7	1.7	.7	8.1	85	32.2	90	95	66	0	0	6	4
MOBILE	81	69	87	66	75	-7	10.2	8.6	5.7	14.5	105	37.9	93	90	67	0	0	5	3
MONTGOMERY	81	69	89	67	75	-7	8.9	8.1	5.4	14.6	168	37.1	117	96	73	0	0	6	4
AK ANCHORAGE	65	55	71	52	60	2	.1	-.4	.1	2.2	66	6.6	93	84	61	0	0	1	0
BARROW	48	36	63	31	42	3	.3	.1	.2	1.1	80	1.9	82	97	72	0	2	5	0
FAIRBANKS	68	55	72	51	61	2	.1	-.3	0	3.5	104	6.7	120	97	66	0	0	5	0
JUNEAU	67	51	74	46	59	3	.5	-.6	.2	10.2	131	29.3	117	96	61	0	0	5	0
KODIAK	63	53	75	50	58	3	.1	-1.0	.1	8.1	103	45.1	115	96	78	0	0	2	0
NOME	52	44	55	38	48	-3	2.3	1.6	1.1	5.5	142	7.7	111	98	80	0	0	5	2
AZ PHOENIX	105	85	108	79	95	3	0	-.2	0	5.3	500	6.7	187	54	24	7	0	0	0
PRESCOTT	85	61	90	59	73	0	.6	-.3	.4	4.6	106	4.9	47	66	30	2	0	2	0
TUCSON	98	73	103	70	86	0	.2	-.4	.2	4.0	132	5.1	90	68	27	7	0	3	0
YUMA	106	81	111	80	94	0	0	-.1	0	2.1		2.8	235	64	23	7	0	0	0
AR FORT SMITH	86	63	91	60	75	-8	.1	-.6	.1	5.3	74	19.7	80	96	42	1	0	1	0
LITTLE ROCK	85	66	88	65	75	-7	1.2	.6	1.2	5.1	78	27.1	93	90	60	0	0	2	1
CA BAKERSFIELD	97	67	100	62	82	-2	0	0	0	T	14	1.3	33	58	22	7	0	0	0
EUREKA	62	53	65	52	58	1	T	0	T	1.1	166	16.8	75	95	76	0	0	2	0
FRESNO	99	67	103	61	83	2	0	0	0	.2	250	2.1	30	58	20	7	0	0	0
LOS ANGELES	77	66	82	65	72	2	0	0	0	T	0	1.7	20	83	60	0	0	0	0
RED BLUFF	96	62	102	59	79	-3	0	0	0	.1	11	4.3	33	67	20	6	0	0	0
SACREMENTO	92	57	97	52	74	-2	0	0	0	.1	69	3.0	28	85	25	6	0	0	0
SAN DIEGO	79	72	81	70	75	3	0	0	0	.2	350	1.4	23	88	71	0	0	0	0
SAN FRANCISCO	71	53	75	52	62	0	0	0	0	T	21	4.0	32	90	54	0	0	0	0
CO DENVER	84	61	89	58	72	-2	1.7	1.3	.8	4.1	109	9.3	89	84	36	0	0	4	1
GRAND JUNCTION	91	64	94	62	77	-1	.1	-.1	.1	2.3	225	6.0	135	71	27	4	0	2	0
PUEBLO	88	65	92	60	76	0	1.4	1.0	1.1	6.3	193	9.9	142	85	35	4	0	3	1
CT BRIDGEPORT	84	66	89	58	75	0	.7	-.1	.7	10.8	158	33.0	136	87	55	0	0	2	1
HARTFORD	87	62	90	55	74	1	.3	-.5	.2	6.7	97	32.7	129	94	44	2	0	2	0
DC WASHINGTON	84	71	88	65	77	-2	.6	-.4	.3	7.0	89	25.8	111	92	61	0	0	5	0
FL APALACHICOLA	83	71	87	67	77	-5	7.3	5.6	3.7	21.8	168	46.0	152	90	72	0	0	5	2
DAYTONA BEACH	88	74	90	73	81	0	.3	-1.0	.2	9.6	76	27.2	101	91	65	1	0	3	0
JACKSONVILLE	88	72	91	70	80	-1	.2	-1.4	.1	10.8	84	28.0	89	99	62	2	0	3	0
KEY WEST	86	79	88	74	83	-2	.8	-.1	.6	11.1	121	27.6	145	79	66	0	0	3	1
MIAMI	88	77	90	73	83	0	.2	-1.1	.1	15.3	97	37.3	118	87	58	2	0	5	0
ORLANDO	88	74	90	72	81	-2	1.0	-.6	.5	12.6	78	27.7	91	100	67	3	0	3	0
TALLAHASSEE	85	72	93	69	78	-3	3.8	1.9	1.7	13.7	83	44.9	109	97	70	3	0	5	2
TAMPA	90	75	91	72	82	0	3.0	1.2	1.4	10.5	77	21.5	77	93	57	5	0	5	2
WEST PALM BEACH	87	77	88	73	82	0	1.1	0	.4	13.8	95	39.1	122	91	68	0	0	4	0
GA ATLANTA	79	68	89	65	74	-6	3.2	2.3	1.2	12.6	145	42.3	130	96	70	0	0	5	3
AUGUSTA	86	70	94	68	78	-3	2.5	1.6	1.4	10.0	113	38.3	132	93	60	3	0	5	2
MACON	85	72	92	69	79	-4	5.9	5.0	2.3	16.0	182	38.9	129	92	70	3	0	5	4
SAVANNAH	88	71	94	67	80	-2	2.1	.4	.7	10.0	71	35.9	112	94	62	2	0	5	2
HI HILO	83	69	85	67	76	0	1.4	-.9	.7	12.0	74	54.9	73	90	60	0	0	6	1
HONOLULU	88	75	91	74	82	1	T	-.1	T	.3	26	5.1	37	77	46	1	0	1	0
KAHULUI	90	70	92	66	80	1	0	-.1	0	.3	36	6.4	49	69	47	5	0	0	0
LIHUE	85	77	86	75	81	2	.1	-.4	.1	2.1	54	10.1	41	74	56	0	0	1	0
ID BOISE	92	60	96	55	76	1	T	-.1	T	1.7	138	7.5	101	70	20	5	0	0	0
LEWISTON	93	66	96	60	79	4	T	-.1	T	1.9	95	7.1	91	67	26	7	0	0	0
POCATELLO	85	56	90	52	70	-2	.3	.2	.2	3.9	248	9.9	143	85	33	1	0	3	0
IL CHICAGO	86	58	90	50	72	-1	.1	-.7	.1	5.2	63	19.3	94	96	42	2	0	1	0
MOLINE	87	61	91	53	74	-1	0	-1.0	0	8.4	86	22.7	96	91	44	3	0	0	0
PEORIA	83	62	88	56	73	-2	T	-.8	T	7.9	95	24.7	113	95	55	0	0	0	0
QUINCY	86	63	89	57	75	-2	0	-.9	0	8.8	99	24.8	107	84	48	0	0	0	0
ROCKFORD	86	58	91	48	72	-1	T	-.9	T	6.8	71	18.0	79	99	46	1	0	0	0
SPRINGFIELD	86	63	89	56	74	-2	T	-.7	T	5.8	75	24.2	112	92	46	0	0	1	0
IN EVANSVILLE	86	67	89	59	77	-1	T	-.8	T	4.9	61	24.0	89	86	48	0	0	1	0
FORT WAYNE	83	63	84	54	73	0	.4	-.3	.3	4.4	59	18.5	86	94	57	0	0	3	0
INDIANAPOLIS	83	64	85	57	74	-1	.2	-.7	.1	6.5	74	22.0	88	98	63	0	0	3	0
SOUTH BEND	84	63	86	55	74	2	.5	-.4	.4	5.7	70	18.4	81	78	42	0	0	2	0
IA DES MOINES	88	65	93	59	76	0	0	-.8	0	14.0	178	28.9	148	84	47	2	0	0	0
SIOUX CITY	87	66	89	59	76	1	T	-.7	T	9.4	121	24.7	147	87	52	0	0	1	0
WATERLOO	83	61	87	51	72	-1	0	-.9	0	10.3	108	23.6	110	90	49	0	0	1	0
KS CONCORDIA	92	65	95	58	79	-1	.1	-.6	.1	4.6	57	18.4	104	77	36	5	0	1	0
DODGE CITY	95	69	100	67	82	2	1.2	.5	1.1	3.7	57	13.1	92	68	29	6	0	2	1
GOODLAND	86	62	91	60	74	-2	1.7	1.2	1.7	6.7	124	15.6	138	90	41	3	0	1	1
TOPEKA	89	60	91	55	75	-4	T	-.8	T	11.8	123	25.7	123	90	44	4	0	1	0
WICHITA	94	66	97	64	80	-2	0	-.7	0	3.0	38	16.9	94	64	25	7	0	0	0
KY BOWLING GREEN	81	65	84	59	73	-5	.3	-.5	.2	7.5	80	36.6	115	98	61	0	0	4	0
LEXINGTON	82	66	85	58	74	-2	.2	-.8	.2	7.2	74	26.7	89	98	63	0	0	4	1
LOUISVILLE	84	67	87	60	76	-3	1.5	.7	.8	8.9	109	27.9	100	84	55	0	0	4	0
LA ALEXANDRIA	89	69	91	64	79	-4	.3	-.6	.3	9.2	101	36.4	101	89	49	2	0	1	0
BATON ROUGE	85	70	88	67	78	-4	.8	-.7	.4	8.4	76	24.6	69	92	58	0	0	4	0
LAKE CHARLES	87	70	89	67	79	-3	4.1	2.9	3.1	13.3	127	35.3	114	99	59	0	0	3	2
NEW ORLEANS	82	70	85	67	76	-6	4.2	2.7	3.3	15.2	124	34.7	94	88	67	0	0	5	2

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

+100 = NORMAL & ACTUAL NEAR THE SAME

Weather Data for the Week Ending AUGUST 4

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 8	PCT. NORMAL SINCE June 8	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	89	67	92	64	78	-5	.6	0	.6	6.4	87	26.1	93	94	50	2	0	1	1
ME CARIBOU	80	53	83	48	66	1	T	-.9	T	10.2	132	25.5	126	93	40	0	0	0	0
PORTLAND	83	61	88	56	72	3	T	-.6	T	7.7	123	34.8	140	85	46	0	0	0	0
MD BALTIMORE	84	66	89	60	75	-2	2.5	1.5	1.8	7.3	89	26.2	105	85	53	0	0	5	2
SALISBURY	85	69	92	63	77	0	.6	-.6	.3	9.7	110	34.1	130	99	74	3	0	3	0
MA BOSTON	84	67	91	61	76	2	0	-.7	0	7.4	123	37.6	149	87	54	1	0	0	0
CHATHAM	77	62	81	59	69	0	.6	-.3	.6	7.5	121	36.2	137	--	--	0	0	1	1
MI ALPENA	80	56	86	42	68	2	1.1	.4	1.0	6.3	96	15.0	89	99	56	0	0	3	1
DETROIT	84	60	88	50	72	0	1.0	.3	1.0	2.9	41	14.4	76	88	48	0	0	2	1
FLINT	83	60	87	49	71	1	.5	-.2	.4	4.8	75	15.2	86	91	51	0	0	3	0
GRAND RAPIDS	85	59	91	51	72	1	T	-.7	T	2.8	39	14.5	73	96	45	1	0	1	0
HOUGHTON LAKE	81	57	86	47	69	2	.7	.1	.5	7.8	122	16.6	103	94	50	0	0	2	1
LANSING	83	59	88	46	71	0	.1	-.5	.1	3.1	46	14.1	79	91	51	0	0	2	0
MARQUETTE	76	55	84	42	65	0	.4	-.3	.4	4.7	64	16.9	77	98	61	0	0	1	0
MUSKEGON	83	58	86	51	71	0	T	-.6	T	4.3	81	16.4	93	90	46	0	0	2	0
SAULT STE. MARIE	79	55	86	43	67	2	.3	-.4	.3	6.2	93	14.5	81	100	63	0	0	1	0
MN ALEXANDRIA	83	65	91	61	74	3	.5	-.3	.4	9.4	125	17.2	111	92	52	1	0	2	0
DULUTH	79	59	82	50	69	3	.4	-.5	.2	7.1	84	13.2	74	88	49	0	0	2	0
INT'L FALLS	82	60	85	54	71	5	.2	-.5	.2	8.8	112	12.7	86	93	48	0	0	1	0
MINNEAPOLIS	84	67	86	59	75	2	1.3	.5	1.2	12.0	149	22.1	132	83	50	0	0	2	1
ROCHESTER	82	61	86	51	72	1	T	-.8	T	7.1	85	16.6	94	88	51	0	0	2	0
MS GREENWOOD	83	67	86	63	75	-7	1.4	.6	.7	6.9	83	30.5	88	100	69	0	0	3	1
JACKSON	87	69	89	65	78	-4	.1	-.9	.1	6.3	80	28.0	83	95	51	0	0	2	0
MERIDIAN	83	71	89	70	77	-4	1.1	.1	.5	8.9	95	31.1	88	93	64	0	0	4	0
MO CAPE GIRARDEAU	84	65	88	58	75	--	.2	-.6	.2	3.5	46	20.4	73	96	56	0	0	1	0
COLUMBIA	89	61	94	56	75	-3	T	-.7	T	12.2	160	30.8	136	92	38	4	0	0	0
KANSAS CITY	88	63	93	58	75	-4	0	-.8	0	8.1	85	23.8	108	83	36	2	0	0	0
SAINT LOUIS	88	66	92	60	77	-2	.3	-.3	.3	3.8	50	24.9	113	90	41	2	0	2	0
SPRINGFIELD	88	60	91	58	74	-4	.1	-.5	.1	5.7	66	22.4	92	89	34	3	0	1	0
MT BILLINGS	88	64	93	61	76	3	.5	.3	.4	2.4	80	6.9	68	80	30	3	0	3	0
GLASGOW	90	65	100	59	77	6	.2	-.2	.2	2.1	50	4.3	53	76	32	3	0	1	0
GREAT FALLS	86	57	92	52	71	1	.2	-.1	.1	2.3	58	8.0	74	84	28	2	0	3	0
HAVRE	86	60	92	57	73	2	T	-.2	T	1.0	28	3.9	50	77	30	1	0	1	0
HELENA	85	56	89	50	71	2	.1	-.1	.1	2.4	75	5.6	73	78	28	0	0	1	0
KALISPELL	82	55	87	47	69	3	.5	.2	.4	2.3	70	8.1	84	86	32	0	0	2	0
MILES CITY	91	65	105	61	78	3	.2	0	.2	3.9	90	6.2	63	79	30	4	0	1	0
MISSOULA	85	56	90	51	70	2	.8	.6	.4	2.3	81	8.9	104	93	34	1	0	3	0
NE GRAND ISLAND	91	67	93	62	79	2	T	-.6	T	5.9	89	24.0	149	75	38	5	0	1	0
LINCOLN	91	66	94	59	79	1	.4	-.3	.4	7.7	103	26.8	150	77	39	5	0	2	0
NORFOLK	89	66	92	61	78	2	.2	-.4	.2	8.0	101	24.7	147	83	46	4	0	1	0
NORTH PLATTE	88	62	93	57	75	0	.6	.1	.4	5.5	80	15.7	110	68	35	4	0	4	0
OMAHA	87	66	91	60	76	0	.4	-.5	.4	9.8	119	24.4	129	79	49	2	0	1	0
SCOTTSBLUFF	91	61	98	58	76	2	.1	-.2	0	3.0	59	10.4	95	84	33	4	0	3	0
VALENTINE	89	65	95	62	77	2	.3	-.3	.2	8.8	155	16.3	135	79	38	4	0	2	0
NV ELY	81	49	85	45	65	-3	.7	.6	.3	3.2	207	6.2	106	93	36	0	0	4	0
LAS VEGAS	99	74	105	68	86	-4	0	-.1	0	2.7	422	2.8	114	60	21	7	0	0	0
RENO	89	51	91	46	70	1	T	-.1	T	.8	118	1.9	39	66	17	2	0	0	0
WINNEMUCCA	87	50	92	46	68	-4	.8	.7	.7	3.2	281	8.3	165	80	21	3	0	4	1
NH CONCORD	83	58	90	51	71	1	.1	-.6	.1	7.4	118	30.5	150	96	46	1	0	1	0
NJ ATLANTIC CITY	86	66	91	58	76	1	1.1	0	.8	7.0	94	30.5	124	90	52	3	0	3	1
NM ALBUQUERQUE	93	65	96	62	79	1	.4	.1	.4	2.0	100	3.7	86	69	24	6	0	2	0
CLOVIS	86	65	91	62	76	-3	1.7	1.0	1.3	10.2	176	15.0	144	80	39	1	0	4	1
ROSWELL	91	67	94	64	79	-2	.1	-.3	.1	5.4	210	8.0	176	79	29	5	0	3	0
NY ALBANY	82	60	85	55	71	0	0	-.7	0	5.6	83	25.1	121	98	57	0	0	0	0
BINGHAMTON	80	63	84	56	72	3	.4	-.4	.3	8.5	113	26.6	123	93	54	0	0	2	0
BUFFALO	83	63	85	53	73	2	.3	-.6	.2	8.4	136	22.4	109	86	45	0	0	3	0
NEW YORK	83	69	89	62	76	-1	.5	-.5	.4	13.0	175	38.5	154	89	58	0	0	2	0
ROCHESTER	82	62	85	52	72	1	1.1	.5	1.1	4.7	83	19.9	110	94	52	0	0	2	1
SYRACUSE	81	59	84	53	70	-1	.5	-.3	.5	6.1	78	20.7	91	100	56	0	0	1	1
NC ASHEVILLE	77	63	87	60	70	-4	2.1	1.1	.8	10.8	116	35.0	118	100	78	0	0	7	1
CHARLOTTE	82	68	89	64	75	-4	1.5	.6	1.1	9.3	116	34.4	125	97	64	0	0	3	1
GREENSBORO	81	67	88	62	74	-4	.9	-.1	.5	15.8	180	39.0	149	98	66	0	0	4	1
HATTERAS	84	75	88	71	79	0	.9	-.5	.6	8.2	79	29.4	96	94	69	0	0	3	1
NEW BERN	89	76	94	70	82	2	1.7	.2	.6	12.6	98	39.1	122	84	62	4	0	4	2
RALEIGH	82	68	91	63	75	-3	1.5	.5	.6	12.9	149	38.7	149	98	69	2	0	3	2
WILMINGTON	85	72	91	67	78	-3	1.9	.3	1.2	10.2	72	31.7	97	100	66	1	0	4	1
ND BISMARCK	88	66	96	62	77	6	.6	.2	.4	5.0	95	11.3	105	86	41	2	0	3	0
FARGO	84	65	88	62	75	4	T	-.7	T	6.0	88	11.2	87	88	50	0	0	0	0
GRAND FORKS	83	64	87	61	73	4	.8	.2	.6	8.6	140	13.1	113	89	54	0	0	4	1
WILLISTON	89	65	103	56	77	6	.1	-.3	.1	2.9	62	6.7	70	79	36	3	0	2	0
OH AKRON-CANTON	80	62	84	52	71	-1	.6	-.3	.6	5.3	68	20.8	91	94	60	0	0	2	1
CINCINNATI	83	66	85	60	75	-1	1.6	.8	.8	6.3	71	22.6	87	88	57	0	0	3	2
CLEVELAND	80	61	87	50	71	-1	1.1	.3	.6	7.5	103	24.8	114	83	52	0	0	3	1
COLUMBUS	84	63	87	55	74	0	1.6	.7	1.1	5.5	64	20.3	85	86	47	0	0	2	2

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

(continued from p. 16)

PASTURES AND LIVESTOCK: Pastures and ranges improved with additional moisture across much of the East, but dry conditions caused deterioration in parts of the southern Plains. Pastures were rated fair to mostly good, except in the southern Plains where they were rated poor. Livestock producers continued culling herds in this area because of the reduced availability of grazing.

Weather Data for the Week Ending AUGUST 4

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 8	PCT. NORMAL SINCE June 8	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	81	62	85	52	71	-3	.4	-.4	.3	4.6	61	20.3	90	84	49	0	0	4	0
TOLEDO	82	61	87	50	72	0	2.2	1.5	1.1	6.0	84	19.7	100	96	56	0	0	3	2
YOUNGSTOWN	80	61	87	53	71	1	1.3	.5	.9	9.1	113	23.5	102	85	53	0	0	3	1
OK OKLAHOMA CITY	91	66	95	63	79	-4	.3	-.3	.3	4.1	57	13.7	68	68	30	4	0	1	0
TULSA	91	66	96	64	79	-5	0	-.6	0	2.2	26	26.9	112	79	31	6	0	0	0
OR ASTORIA	68	52	72	46	60	-1	T	-.2	T	4.0	112	35.1	94	89	63	0	0	0	0
BURNS	84	49	86	47	66	-3	.1	0	.1	1.5	126	6.3	166	—	—	0	0	1	0
MEDFORD	89	57	99	51	73	0	T	0	T	.9	97	7.1	67	81	31	3	0	1	0
PENDLETON	90	62	96	58	76	2	T	-.1	T	1.2	118	8.0	114	64	23	4	0	1	0
PORTLAND	82	58	91	57	70	2	0	-.2	0	4.1	204	19.7	98	79	39	1	0	0	0
SALEM	83	53	92	48	68	1	T	-.1	T	4.2	267	23.3	106	90	38	1	0	0	0
PA ALLENTOWN	83	66	87	58	75	1	.1	-.9	0	13.3	163	38.2	147	88	54	0	0	3	0
ERIE	81	63	85	52	72	2	T	-.8	T	6.5	87	21.0	96	82	53	0	0	2	0
HARRISBURG	86	69	91	63	78	2	.5	-.2	.2	8.5	116	33.5	143	—	—	1	0	5	0
PHILADELPHIA	82	68	87	60	75	-2	T	-.9	T	9.9	118	32.1	129	89	57	0	0	1	0
PITTSBURGH	81	61	88	54	71	-1	1.1	.3	1.1	6.1	80	20.9	90	90	54	0	0	3	1
SCRANTON	82	66	86	58	74	2	.5	-.2	.5	10.4	143	27.8	136	89	57	0	0	2	1
RI PROVIDENCE	83	65	86	57	74	1	.3	-.6	.3	9.4	150	37.1	143	88	54	0	0	1	0
SC CHARLESTON	88	73	93	69	81	0	1.1	-.5	.6	7.9	53	35.4	107	93	61	2	0	3	1
COLUMBIA	86	70	93	67	78	-3	.9	-.4	.5	15.5	146	37.9	120	98	63	2	0	3	0
FLORENCE	86	71	92	66	78	-3	.6	-.5	.5	12.4	112	34.7	122	100	71	2	0	3	1
GREENVILLE	80	67	89	64	73	-5	2.9	2.1	1.5	17.7	190	46.9	144	95	71	0	0	4	2
SD ABERDEEN	87	67	93	65	77	4	.5	0	.5	8.2	138	15.4	122	94	56	2	0	2	1
HURON	88	68	93	64	78	4	1.0	.5	.7	14.2	245	22.2	170	89	49	4	0	3	1
RAPID CITY	90	66	97	61	78	4	.2	-.1	.2	6.6	120	12.3	100	76	35	3	0	2	0
SIOUX FALLS	86	67	93	62	77	2	.1	-.5	.1	10.2	151	22.2	144	87	54	2	0	3	0
TN CHATTANOOGA	80	67	89	65	74	-5	3.2	2.3	1.0	10.3	124	34.6	104	95	66	0	0	7	4
KNOXVILLE	80	66	84	63	73	-5	.4	-.4	.1	13.6	156	37.5	122	98	68	0	0	6	0
MEMPHIS	85	70	88	67	77	-5	.5	-.4	.3	6.2	77	32.8	98	93	58	0	0	3	0
NASHVILLE	82	67	86	61	74	-6	1.9	1.2	.7	12.0	151	39.4	126	89	61	0	0	5	2
TX ABILENE	89	69	93	63	79	-6	1.6	1.1	1.5	4.2	87	6.8	50	71	30	3	0	3	1
AMARILLO	88	62	92	58	75	-4	.1	-.5	.1	7.7	118	10.8	87	82	37	1	0	1	0
AUSTIN	94	71	96	68	83	-2	0	-.4	0	3.1	61	9.6	52	76	31	7	0	0	0
BEAUMONT	88	73	89	70	80	-3	1.3	.1	1.2	6.2	62	29.7	101	94	55	0	0	3	1
BROWNSVILLE	93	74	95	73	84	-1	.8	.5	.7	4.1	94	15.7	136	93	50	6	0	3	1
CORPUS CHRISTI	92	73	94	71	83	-3	.7	.2	.7	1.2	21	9.8	67	85	46	6	0	1	1
DEL RIO	95	74	97	70	85	-2	0	-.3	0	1.4	38	5.6	59	68	29	7	0	0	0
EL PASO	96	69	99	65	82	0	1.0	.7	1.0	4.9	208	6.2	157	73	24	7	0	2	1
FORT WORTH	94	68	98	64	81	-6	.1	-.3	.1	3.3	69	16.4	88	76	28	7	0	1	0
GALVESTON	89	77	92	74	83	-1	1.7	.9	1.7	4.4	57	15.0	71	85	58	4	0	1	1
HOUSTON	91	70	94	67	81	-2	1.0	.3	1.0	6.5	83	20.8	80	83	42	6	0	2	1
LUBBOCK	89	65	92	63	77	-2	T	-.5	T	4.9	90	6.0	54	77	40	4	0	1	0
MIDLAND	91	69	94	64	80	-2	.1	-.2	.1	3.1	92	7.1	91	82	31	4	0	2	0
SAN ANGELO	91	66	93	59	79	-6	.3	0	.3	3.7	114	7.8	79	82	35	6	0	1	0
SAN ANTONIO	95	71	97	64	83	-2	T	-.5	T	1.4	27	9.5	58	75	29	7	0	0	0
VICTORIA	93	74	96	70	84	-1	.2	-.3	.2	3.3	45	13.5	67	87	42	6	0	1	0
WACO	95	68	99	63	81	-6	T	-.4	T	3.6	80	13.1	69	81	33	7	0	0	0
WICHITA FALLS	96	68	99	63	82	-4	T	-.4	T	2.3	45	6.8	42	60	21	7	0	0	0
UT BLANDING	88	58	92	56	73	0	.6	.2	.3	2.6	158	4.9	84	78	27	2	0	3	0
CEDAR CITY	87	55	93	51	71	-3	T	-.3	T	2.8	162	7.1	118	79	26	4	0	0	0
SALT LAKE CITY	88	66	93	62	77	-1	.1	-.1	0	3.6	203	12.4	125	79	37	2	0	3	0
VT BURLINGTON	82	61	88	53	72	2	.2	-.7	.1	6.9	92	22.1	115	78	39	0	0	2	0
VA NORFOLK	83	70	90	64	77	-3	1.7	.4	1.6	9.2	98	35.2	131	93	65	3	0	4	1
RICHMOND	85	68	92	63	76	-2	1.9	.6	1.8	7.4	78	34.5	133	95	63	3	0	3	1
ROANOKE	83	66	90	60	75	-2	T	-.9	T	6.5	89	25.5	107	96	58	3	0	1	0
WA COLVILLE	85	59	90	57	72	3	.5	.3	.4	6.2	266	17.1	173	88	48	1	0	3	0
QUILLAYUTE	69	48	73	43	59	-1	T	-.6	T	3.4	60	64.6	116	95	54	0	0	0	0
SEATTLE-TACOMA	76	55	83	52	66	1	.2	-.1	.2	2.9	132	20.6	102	82	41	0	0	1	0
SPOKANE	86	60	91	55	73	2	.3	.2	.2	2.7	149	10.6	109	88	32	1	0	3	0
YAKIMA	88	61	92	56	74	4	.1	.1	.1	1.6	206	5.3	114	73	32	3	0	1	0
WV BECKLEY	76	62	84	56	69	-1	.7	-.2	.5	12.2	138	28.0	103	100	66	0	0	3	0
CHARLESTON	86	65	92	60	76	1	1.3	.1	1.2	8.1	87	22.9	84	93	49	1	0	4	1
HUNTINGTON	86	65	89	59	75	0	.5	-.5	.4	5.6	65	20.8	79	95	52	0	0	3	0
PARKERSBURG	86	67	89	60	76	2	1.5	.6	1.3	4.1	43	17.6	62	91	47	0	0	3	1
WI GREEN BAY	80	62	82	54	71	1	.9	.2	.6	9.5	140	18.7	111	95	60	0	0	4	1
LA CROSSE	87	64	91	56	75	2	.5	-.4	.4	10.9	129	20.1	106	90	45	2	0	2	0
MADISON	84	60	88	49	72	1	T	-.8	T	9.0	110	18.9	99	88	45	0	0	0	0
MILWAUKEE	84	63	89	55	74	3	T	-.7	T	7.6	101	20.7	108	78	45	0	0	0	0
WAUSAU	79	63	83	58	71	1	.8	-.1	.5	14.3	170	23.4	124	94	61	0	0	4	1
WY CASPER	86	58	91	54	72	0	.1	-.1	.1	3.6	154	10.5	129	91	30	2	0	2	0
CHEYENNE	78	56	82	54	67	-2	1.1	.7	.5	5.6	139	12.7	133	94	45	0	0	3	1
LANDER	83	60	90	56	71	0	.7	.6	.5	3.5	160	10.2	108	73	35	2	0	3	0
SHERIDAN	85	59	92	53	72	1	.7	.5	.6	3.6	111	10.5	102	90	36	2	0	3	1
PR SAN JUAN	88	74	93	72	81	-1	3.2	2.0	1.3	11.5	113	22.2	82	87	60	2	0	4	3

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

(continued from p. 12)

Winter wheat combining was 81 percent complete by July 29, slightly behind the average. Progress ranged from 4 percent finished in Idaho to complete in Illinois, Indiana, Kansas, Missouri, Oklahoma, and Texas. Growers in the Corn Belt began plowing harvested fields as the month ended. Spring wheat harvesting advanced to 2 percent finished. Idaho and Montana producers had not started spring wheat harvesting. Combining was 10 percent complete in South Dakota and just beginning in Minnesota and North Dakota by late July.

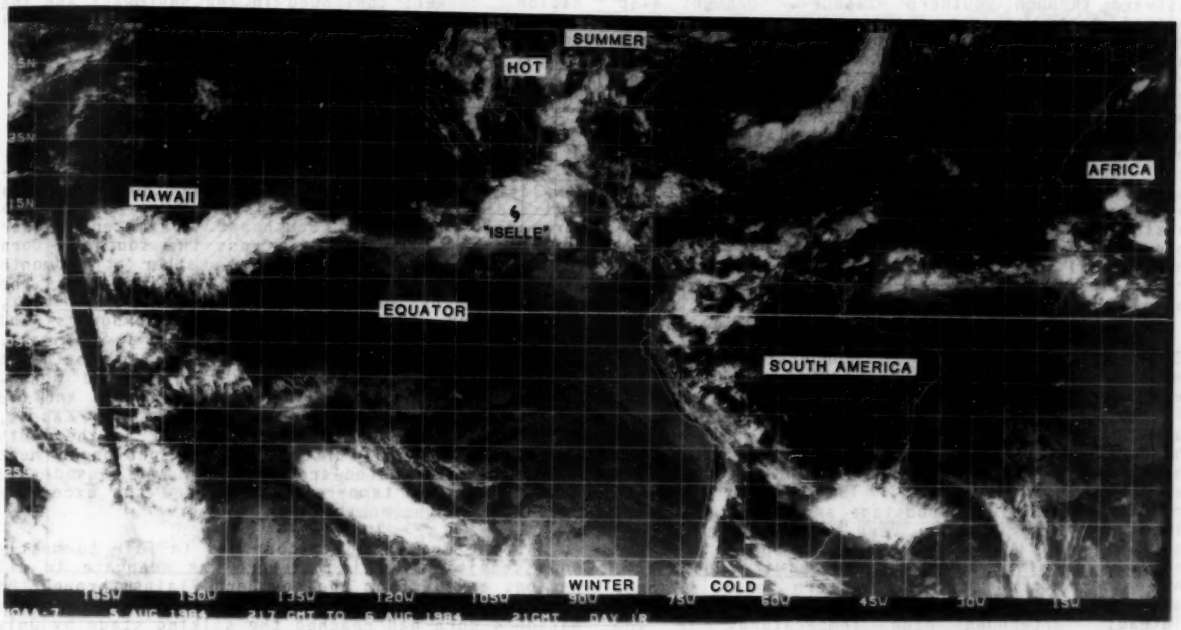
COOLING DEGREE DAY DATA WEEKLY SUMMARY
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

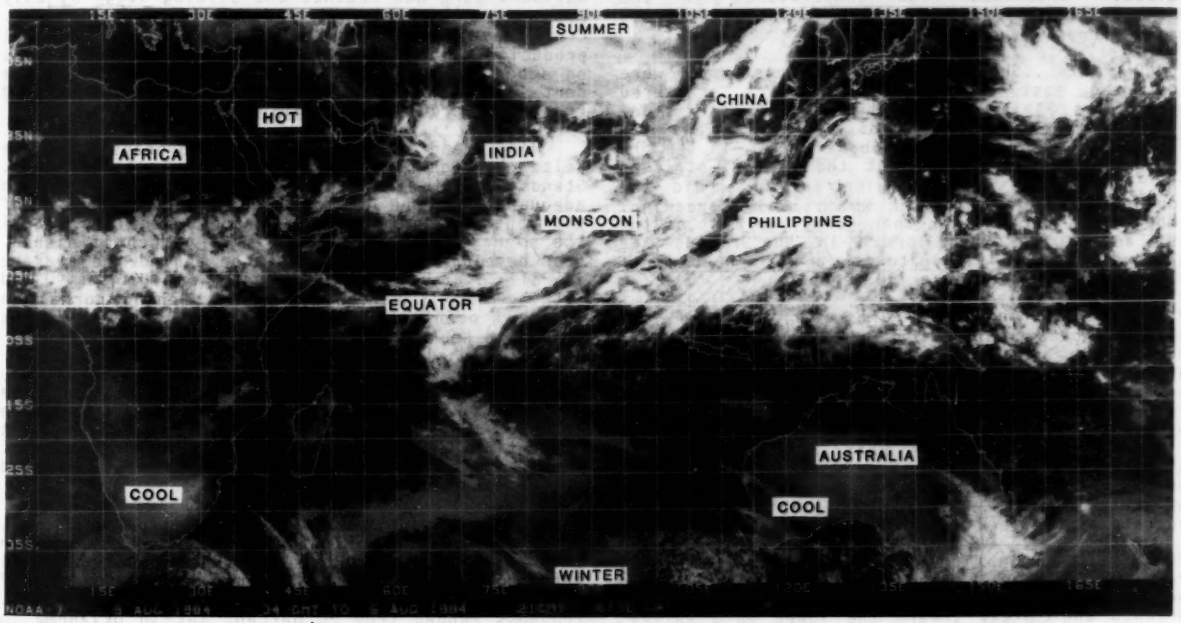
LAST DATE OF DATA COLLECTION PERIOD IS 8- 4-1984
ACCUMULATIONS ARE FROM JANUARY 1
** = NORMAL LESS THAN 100 OR RATIO UNCALCULABLE

STATE CITY	CALL	WEEK TOTAL	WEEK DEV FROM NORM	WEEK DEV FROM L YR	CUM TOTAL	CUM DEV FROM NORM	CUM DEV FROM L YR	CUM DEV FROM NORM PRCT	CUM DEV FROM L YR PRCT
AL BIRMINGHAM	BHM	64	-45	-41	1024	-144	13	-12	1
AL MOBILE	MOB	71	-48	-33	1281	-310	89	-19	7
AL MONTGOMERY	MGM	73	-46	-32	1258	-137	136	-10	12
AK ANCHORAGE	ANC	0	0	0	5	5	5	**	**
AK BARROW	BRW	0	0	0	0	0	0	**	**
AK FAIRBANKS	FAI	2	-2	0	45	-5	-69	**	**
AK JUNEAU	JNU	0	0	0	0	0	0	**	**
AK KODIAK	ADQ	1	1	-3	5	5	1	**	**
AK NOME	OME	0	0	0	2	2	1	**	**
AZ FLAGSTAFF	FLG	1	-13	-5	72	-26	39	**	**
AZ PHOENIX	PHX	211	23	-11	2700	485	258	22	11
AZ TUCSON	TUS	145	3	-13	1803	129	188	8	12
AZ WINSLOW	INW	85	-9	-10	824	55	119	7	17
AZ YUMA	YUM	202	-1	-44	2669	227	95	9	4
AR FORT SMITH	FSM	69	-54	-64	1080	-135	113	-11	12
AR LITTLE ROCK	LRT	75	-44	-55	1160	-116	82	-9	8
CA BAKERSFIELD	BFL	121	-14	-30	1233	-158	148	-11	14
CA EUREKA	EKA	0	0	0	0	0	0	**	**
CA FRESNO	FAT	125	14	-19	1493	435	418	41	39
CA LOS ANGELES	LAX	48	13	14	378	84	129	29	52
CA RED BLUFF	RBL	100	-19	-23	1285	143	328	13	34
CA SAN DIEGO	SAN	76	27	10	767	420	304	121	66
CA SAN FRANCISCO	SFO	0	-3	-8	118	91	48	**	**
CA STOCKTON	SCK	89	-2	-13	1014	177	271	21	36
CO DENVER	DEN	53	-9	-18	482	32	97	7	25
CO GRAND JUNCTION	GJT	88	-8	-22	809	14	103	2	15
CO PUEBLO	PUB	82	-1	-8	732	53	148	8	25
CT BRIDGEPORT	BDR	70	1	-13	517	65	50	14	11
CT HARTFORD	BDL	68	11	-33	449	-3	-110	-1	-20
DE WILMINGTON	ILG	81	4	-31	708	77	-22	12	-3
DC WASHINGTON	DCA	87	-11	-50	892	-1	-100	0	-10
FL APALACHICOLA	AQQ	88	-31	-22	1203	-314	-67	-21	-5
FL DAYTONA BEACH	DAB	117	5	5	1289	-354	-4	-22	0
FL FORT MEYER	FMY	132	6	16	2052	-60	330	-3	19
FL JACKSONVILLE	JAX	108	-4	-4	1337	-135	81	-9	6
FL KEY WEST	EYW	125	-15	-1	2543	-196	292	-7	13
FL MIAMI	MIA	127	1	2	2140	-200	-40	-9	-2
FL ORLANDO	MCO	113	-13	-10	1602	-370	-99	-19	-6
FL TALLAHASSEE	TLH	94	-23	-27	1342	-146	6	-10	0
FL TAMPA	TPA	123	-1	1	1849	-86	132	-4	8
FL WEST PALM BEACH	PBI	120	1	-17	1919	-193	-119	-9	-6
GA ATLANTA	ATL	62	-38	-32	975	-60	3	-6	0
GA AUGUSTA	AGS	93	-19	-15	1179	-23	35	-2	3
GA MACON	MCN	96	-23	-22	1315	-64	-73	-5	-5
GA SAVANNAH	SAV	104	-13	-4	1359	-36	-17	-3	-1
HI HILO-HAWAII	ITO	77	3	-1	1919	186	160	11	9
HI HONOLULU-OAHU	HNL	118	6	5	2745	317	474	13	21
HI KAHULUI-MAUI	OGG	107	9	6	2662	558	559	27	27
HI LIHUE-KAUAI	LIH	112	14	10	2616	577	485	28	23
ID BOISE	BOI	77	8	-27	440	-31	78	-7	22
ID LEWISTON	LWS	102	33	3	465	12	82	3	21
ID POCATELLO	PIH	39	-9	-17	246	-45	53	-15	27
IL CHICAGO	ORD	51	-7	-41	436	-93	-187	-9	-30
IL MOLINE	MLI	64	-6	-49	611	-8	-172	-1	-22
IL PEORIA	PIA	59	-11	-52	622	-21	-178	-3	-22
IL ROCKFORD	RFD	50	-6	-53	444	-44	-237	-9	-35
IL SPRINGFIELD	SPI	67	-10	-36	709	-70	-130	-9	-15
IN EVANSVILLE	EVV	82	-9	-39	895	-17	-58	-2	-4
IN FORT WAYNE	FWA	56	0	-48	548	29	-189	6	-26
IN INDIANAPOLIS	IND	62	-8	-44	622	-34	-133	-5	-18
IN SOUTH BEND	SBN	62	10	-40	518	47	-216	10	-29
IA DES MOINES	DSM	80	3	-43	691	1	-181	0	-21
IA DUBUQUE	DBQ	43	-6	-47	376	-39	-178	-9	-32
IA SIOUX CITY	SUX	82	8	-19	536	-102	-74	-16	-12
KS CONCORDIA	CNK	97	-6	-55	898	32	68	4	8
KS DODGE CITY	DDC	119	13	-25	1071	123	103	13	11
KS GOODLAND	GLD	64	-13	-62	478	-142	-182	-23	-28
KS TOPEKA	TOP	70	-28	-67	781	-116	-134	-13	-15
KS WICHITA	ICT	107	-12	-36	1040	-42	180	-4	21
KY LEXINGTON	LEX	65	-12	-43	698	-50	-104	-7	-13
KY LOUISVILLE	SDF	75	-16	-40	841	-22	-35	-3	-4
LA BATON ROUGE	BTR	90	-29	-11	1434	-156	179	-10	14
LA LAKE CHARLES	LCH	98	-21	-28	1582	-23	188	-1	13
LA NEW ORLEANS	MSY	76	-43	-27	1308	-330	-23	-20	-2
LA SHREVEPORT	SHV	92	-34	-38	1364	-133	155	-9	13
ME CARIBOU	CAR	13	-1	-19	129	15	-26	13	-17
ME PORTLAND	PWM	48	15	-5	267	103	7	63	3
MD BALTIMORE	BWI	69	-15	-50	651	-62	-137	-9	-17
MA BOSTON	BOS	78	15	-20	598	155	-87	35	-13
MI ALPENA	APN	27	6	-18	157	37	-171	31	-52
MI DETROIT	DTW	48	-1	-20	433	29	-65	7	-13
MI FLINT	FNT	45	10	-20	367	60	-102	20	-22
MI GRAND RAPIDS	GRR	52	7	-20	399	10	-99	3	-20
MI HOUGHTON LAKE	HTL	29	1	-26	201	-1	-143	0	-42
MI LANSING	LAN	45	3	-23	380	16	-92	4	-19
MI MARQUETTE	MQT	8	-6	-28	96	-20	-167	-17	-63
MI MUSKEGON	MKG	41	-1	-30	249	-59	-219	-19	-47
MI SAULT ST MARIE	SSM	18	-1	-21	77	-18	-153	**	**
MN DULUTH	DLH	31	10	-8	121	15	-122	14	-50
MN INT'L FALLS	INL	43	22	12	107	-63	-160	-37	-60
MN MINNEAPOLIS	MSP	75	19	-26	456	-16	-134	-3	-23
MN ROCHESTER	RST	48	8	-18	233	-121	-211	-34	-48
MN SAINT CLOUD	STC	48	13	-16	287	-11	-127	-4	-31
MS JACKSON	JAN	91	-28	-24	1313	-111	90	-8	7
MS MERIDIAN	MEI	85	-27	-14	985	-353	-32	-26	-3
MO COLUMBIA	COU	72	-19	-49	713	-106	-62	-13	-8
MO KANSAS CITY	MCI	76	-22	-66	742	-136	-97	-15	-12
MO SAINT LOUIS	STL	86	-12	-56	1010	60	-12	6	-1
MO SPRINGFIELD	SGF	67	-30	-56	826	-47	5	-5	1
MT BILLINGS	BIL	80	24	-21	488	152	83	37	20
MT GLASGOW	GGW	87	40	-10	461	167	93	57	25
MT GREAT FALLS	GTF	47	5	-26	264	34	98	15	59
MT HAVRE	HVR	59	17	-20	327	62	116	23	55
MT HELENA	HLN	41	8	-18	237	49	68	26	40
MT KALISPELL	FCA	29	8	-2	106	14	56	**	**
MT MILES CITY	MLS	93	19	-24	571	5	10	13	2
MT MISSOULA	MSO	39	11	-12	163	24	77	17	90
NE GRAND ISLAND	GRI	98	14	-30	742	48	-8	7	-1
NE LINCOLN	LNK	97	6	-42	747	-13	-111	-2	-13
NE NORFOLK	OFK	90	13	-9	636	-3	-54	0	-8
NE NORTH PLATTE	LBF	75	5	-13	487	-39	-15	-7	-3
NE OMAHA	ONA	81	-8	-33	652	-147	-98	-18	-13
NE VALENTINE	VTN	84	14	-12	505	-9	-8	-2	-2
NV ELY	ELY	3	-18	-39	128	8	19	7	17
NV LAS VEGAS	LAS	150	-26	-17	1952	109	295	6	18
NV RENO	RNO	38	3	-31	343	108	162	46	90
NV WINNEMUCCA	WMC	25	-23	-52	272	-81	79	-23	41
NH CONCORD	CON	42	7	-24	295	45	-13	18	-4
NJ ATLANTIC CITY	ACY	80	12	-40	695	181	-40	35	-5
NM ALBUQUERQUE	ABQ	99	7	-4	950	115	72	14	8
NM ROSWELL	ROW	99	-13	-15	1111	-119	63	-10	6
NY ALBANY	ALB	43	1	-32	267	-77	-138	-22	-34
NY BINGHAMTON	BGM	47	19	-15	278	58	-117	26	-30
NY BUFFALO	BUF	55	12	-17	358	39	-132	12	-27
NY NEW YORK	LGA	80	-4	-35	638	-110	-81	-2	-11
NY ROCHESTER	ROC	49	7	-23	316	-34	-145	-10	-31
NY SYRACUSE	SYR	38	-4	-18	242	-91	-146	-27	-38
NC ASHEVILLE	AVL	36	-27	-32	396	-131	-144	-25	-27
NC CAPE HATTERAS	HAT	103	5	-9	944	74	62	9	7
NC CHARLOTTE	CLT	70	-28	-23	876	-101	-58	-10	-6
NC GREENSBORO	GSO	63	-26	-26	731	-120	-10	-14	-1
NC RALEIGH DURHAM	RDU	73	-18	-23	818	-63	-30	-7	-4
NC WILMINGTON	ILM	94	-18	-27	1081	-82	11	-7	1
ND BISMARCK	BIS	86	31	9	285	-26	-70	-8	-20
ND FARGO	FAR	71	28	6	331	-1	-117	0	-26
ND WILLISTON	ISN	88	46	-10	367	75	-96	26	-21
OH AKRON-CANTON	CAK	45	-4	-38	385	-15	-137	-4	-26
OH CLEVELAND	CLE	43	-6	-43	347	-46	-218	-12	-39
OH COLUMBUS	CMH	64	1	-23	532	-24	-67	-4	-11
OH CINCINNATI	CVG	69	-6	-26	614	-51	-128	-8	-17
OH DAYTON	DAY	47	-21	-38	462	-154	-129	-25	-22
OH TOLEDO	TOL	48	0	-24	425	13	-72	3	-14
OH YOUNGSTOWN	YNG	41	6	-45	337	22	-135	7	-29
OK OKLAHOMA CITY	OKC	97	-29	-42	1171	-8	191	-1	19
OK TULSA	TUL	99	-33	-59	1212	-52	-11	-4	-1
OR ASTORIA	AST	0	-3	0	3	-11	2	**	**
OR BURNS	4BW	16	-19	-2	145	-84	86	-37	154
OR MEDFORD	MFR	59	3	-18	390	4	74	1	23
OR PENDLETON	PDT	80	17	0	366	-85	76	-19	26
OR PORTLAND	PDX	57	3	-10	204	15	31	8	18
OR SALEM	SLE	24	3	-4	92	-40	-1	-30	-1
PA ALLENTOWN	ABE	68	5	-32	558	69	-58	14	-9
PA ERIE	ERI	51	16	-15	366	121	-60	49	-14
PA HARRISBURG	CXY	89	12	-5	643	-2	78	0	14
PA PHILADELPHIA	PHL	72	-12	-46	623	-54	-132	-8	-17
PA PITTSBURGH	PIT	47	-2	-28	335	-78	-98	-19	-23
PA SCRANTON	AVP	64	15	-9	439	60	28	16	7
RI PROVIDENCE	PVD	63	7	-40	424	56	-180	15	-30
SC CHARLESTON	CHS	111	-1	0	1274	18	35	1	3
SC COLUMBIA	CAE	92	-20	-15	1157	-122	2	-10	0
SC GREENVILLE	GSP	61	-37	-26	912	-43	59	-5	7
SD ABERDEEN	ABR	87	31	-2	338	-70	-154	-17	-31
SD HURON	HON	96	27	3	403	-42	-99	-8	-18
SD RAPID CITY	RAP	93	30	8	346	-70	-75	-17	-18
SD SIOUX FALLS	FSD	84	18	-5	460	-62	-113	-12	-20
TN CHATTANOOGA	CHA	62	-36	-48	867	-116	-29	-12	-3
TN KNOXVILLE	TYS	58	-33	-39	690	-221	-106	-24	-13
TN MEMPHIS	MEM	88	-31	-42	1258	-50	56	-4	5
TN NASHVILLE	BNA	66	-38	-54	889	-150	-81	-14	-8
TX ABILENE	ABI	100	-39	-29	1627	94	321	6	25
TX AMARILLO	AMA	73	-25	-35	790	-135	21	-15	3
TX AUSTIN	AUS	126	-14	-17	1954	194	557	11	40
TX BROWNSVILLE	BRO	132	-8	-4	2305	41	166	2	8
TX CORPUS CHRISTI	CRP	126	-17	-6	1942	-177	220	-8	13
TX DEL RIO	DRT	139	-8	-9	2053	5	158	0	8
TX EL PASO	ELP	123	4	-12	1402	21	198	2	16
TX FORT WORTH	DFW	115	-39	-33	1612	-133	329	-8	26
TX GALVESTON	GLS	129	-4	-5	1637	-56	111	-3	7
TX HOUSTON	IAH	112	-14	-15	1535	-114	135	-7	10
TX LUBBOCK	LBB	87	-11	-13	1066	-38	105	-3	11
TX MIDLAND ODESSA	MAF	108	-11	-25	1388	21	-8	2	-1
TX SAN ANGELO	SJT	97	-43	-18	1587	-50	258	-3	19
TX SAN ANTONIO	SAT	125	-15	-10	1905	84	427	5	29
TX VICTORIA	VCT	131	-9	3	1935	32	336	2	21
TX WACO	ACT	117	-37	-21	1760	1	360	0	26
TX WICHITA FALLS	SPS	119	-28	-31	1548	0	333	0	27
UT SALT LAKE CITY	SLC	86	-4	-19	700	66	110	10	19
VT BURLINGTON	BTV	49	12	-9	312	38	-53	14	-15
VA LYNCHBURG	LYH	66	-11	-24	680	2	-17	0	-2
VA NORFOLK	ORF	83	-15	-33	925	46	4	5	0
VA RICHMOND	RIC	82	-9	-23	921	90	-37	11	-4
VA ROANOKE	ROA	68	-9	-23	689	-3	34	0	5
WA QUILLAYUTE	UIL	0	-3	0	5	-13	1	**	**
WA SEATTLE-TACOMA	SEA	12	-9	-5	73	-33	17	-31	30
WA SPOKANE	GEG	56	14	0	224	-19	29	-8	15
WA WALLA WALLA	ALW	124	47	15	634	95	187	18	42
WA YAKIMA	YKM	69	27	12	271	-44	12	-14	5
WV BECKLEY	BKW	34	-1	-14	336	32	16	11	5
WV CHARLESTON	CRW	77	7	-17	715	77	15	12	2
WV HUNTINGTON	HTS	74	0	-37	722	9	-27	1	-4
WV PARKERSBURG	PKB	80	10	-14	686	43	34	7	5
WI GREEN BAY	GRB	42	7	-22	264	-17	-127	-6	-32
WI LACROSSE	LSE	72	16	-5	418	-65	-168	-13	-29
WI MADISON	MSN	51	9	-17	330	-7	-167	-2	-34
WI MILWAUKEE	MKE	62	20	-25	427	118	-105	38	-20
WY CASPER	CPR	49	2	-27	263	-37	-35	-12	-12
WY CHEYENNE	CYS	17	-11	-18	140	-73	-12	-34	-8
WY LANDER	LND	46	4	-27	396	113	130	40	49
WY SHERIDAN	SHR	49	7	-46	267	-2	-112	-1	-30

TROPICAL WEATHER

August 5





July Weather and Crop Summary

WEATHER SUMMARY

HIGHLIGHTS: Drought covered the area from south-central Texas through Oklahoma, central Kansas, and parts of Nebraska. Relief came to parts of central Texas late in the month, but the drought worsened in the north and began to spread eastward through southern Missouri. Drought also covered parts of the Pacific Northwest, through Montana, and parts of the northern Plains. A heat wave dominated in California until cooler air moved over the area late in the month. Showers and thunderstorms produced well-above normal rain in the Southwest, the Plateau, and the central Rockies. Showers and thunderstorms kept the East Coast States wet for most of the month. The Corn Belt had adequate moisture in most areas, but southern Michigan, southern Illinois, and parts of Ohio were too dry. Cooler than normal weather kept moisture demand low and helped the pollination of corn and soybeans. Much of the Nation was cooler than normal but most of California and the dry areas of the northern Plains were warmer than normal.

FIRST WEEK...Showers and thunderstorms covered nearly all of the area from the Plains eastward and were scattered in the Southwest and central Plateau. Only a few showers fell in the very dry parts of central Texas and Oklahoma, but violent thunderstorms produced up to 9 inches of rain along the lower Missouri Valley from southeastern Nebraska into Missouri. The river and its tributaries were at floodstage and there was local flooding of some fields. Very heavy rain also fell in Kentucky, West Virginia, and parts of New England. Beneficial showers covered the Southeast, the eastern Corn Belt, and western Texas. A heat wave continued in California and spread into the Plateau. Afternoon high temperatures in the interior of California ranged from 105-112 degrees nearly every day.

SECOND WEEK...Showers and thunderstorms were widespread east of the Plains, more scattered through the Plains and Southwest, and nonexistant in the northern two-third of California and the Northwest. Some beneficial showers fell in the dry parts of northern Texas, but the drought-stricken area in central Texas remained dry, as did the drought area in Montana which was spreading. Temperatures were cooler than normal in most of the East and warmer than normal in the Plains and California. High temperatures in the interior of California remained above 100 degrees.

THIRD WEEK...Some rain fell over most of the Nation. Notable exceptions were: the Northwest; the drought area of Montana, which was spreading into North Dakota; central Texas, where isolated showers were of little benefit; and the drought area of central Oklahoma, which was spreading northeastward. Some heavy showers fell along parts of the east coast. The heat wave continued in California and warmer than normal temperatures covered all of the West. Afternoon high temperatures in California's interior began to moderate as the week ended.

FOURTH WEEK...Rain finally came to parts of the dry areas in Texas, but they only partially relieved the drought in the north. The drought in Oklahoma worsened and spread toward the lower Ohio Valley. No rain fell in the drought area of Montana, and little or none fell in the northern Plains. Cooler air washed over central California and the Southwest, ending the monthlong heat wave. A band of showers from south central South Dakota to central Indiana benefited corn and soybeans. Showers and thunderstorms covered most of the area from Texas to New England, and into the Southwest, the Plateau, and the southern and central Rockies.

Showers and thunderstorms produced moderate to heavy accumulations of rain during the last 3 days of the month in the southeastern corner of the Nation. Showers continued in the Southwest and the central and northern Rockies. Light showers fell in North Dakota but none hit in eastern Montana.

CROP DEVELOPMENT

Heavy rains early in July reflooded some low-laying croplands across the southwestern Corn Belt and replenished soil moisture from the eastern Corn Belt into the Southeast. Limited shower activity left fields dry across the southern Corn Belt at the end of July. Dry weather at midmonth allowed rapid harvesting of small grains across the central Plains and into parts of the Corn Belt, while heavy rains slowed harvest progress and double-cropped soybean planting in the Southeast. Hot, dry conditions continued over the Southwest and into central Texas until late in the month. The drought was relieved in parts of Texas and the Southwest but intensified in Oklahoma and Kansas, hurting crops, pastures, and livestock as the month ended. California suffered from a prolonged heat wave that accelerated crop maturity and caused some damage. Cooler temperature replaced the excessive heat late in the month.

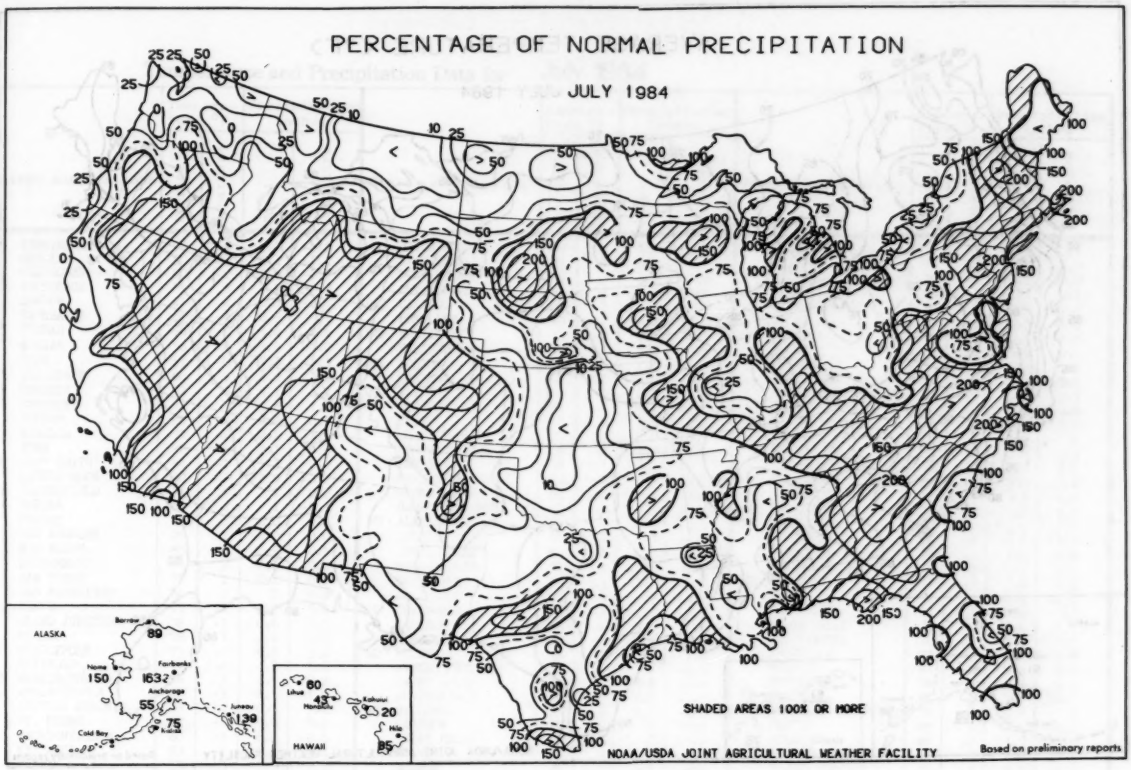
At the end of July, corn was in fair to mostly good condition. Soil moisture was adequate in all regions except from the southern Plains through the southern Corn Belt. Only 60 percent of the Nation's corn had reached the silking stage by July 29, and 8 percent had reached the dough stage. Crop development trailed the average in all producing areas, except Ohio where development was on schedule. Most fields in the south reached the dent stage and many were mature. Harvesting reached 5 percent in Georgia and Louisiana.

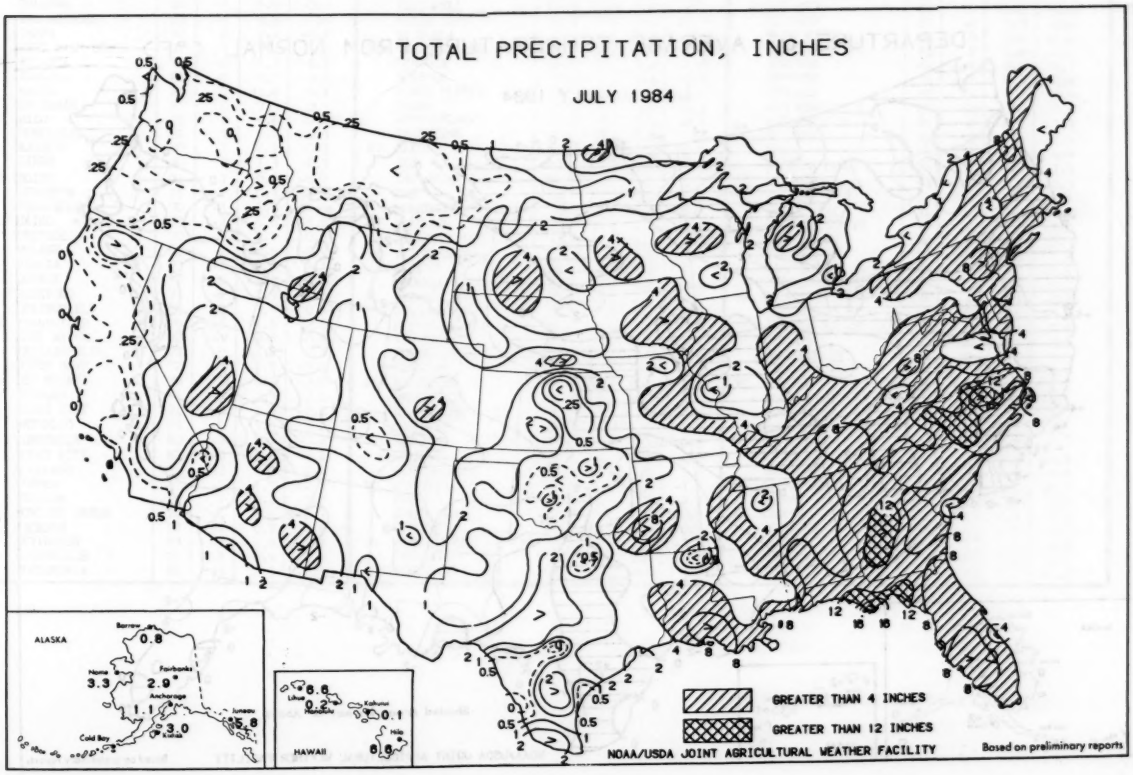
Widespread showers benefited soybeans from the Delta through the Southeast for most of July. Stands were in fair to mostly good condition with adequate moisture in most regions. By the end of the month, blooming was 59 percent complete, equal the average. The pod set was 20 percent finished. Crop development was equal to or behind the average in all States except Arkansas and Kansas. Pod setting was 15 percentage points behind normal in Ohio, 11 points behind in Tennessee, and 10 points behind in Nebraska.

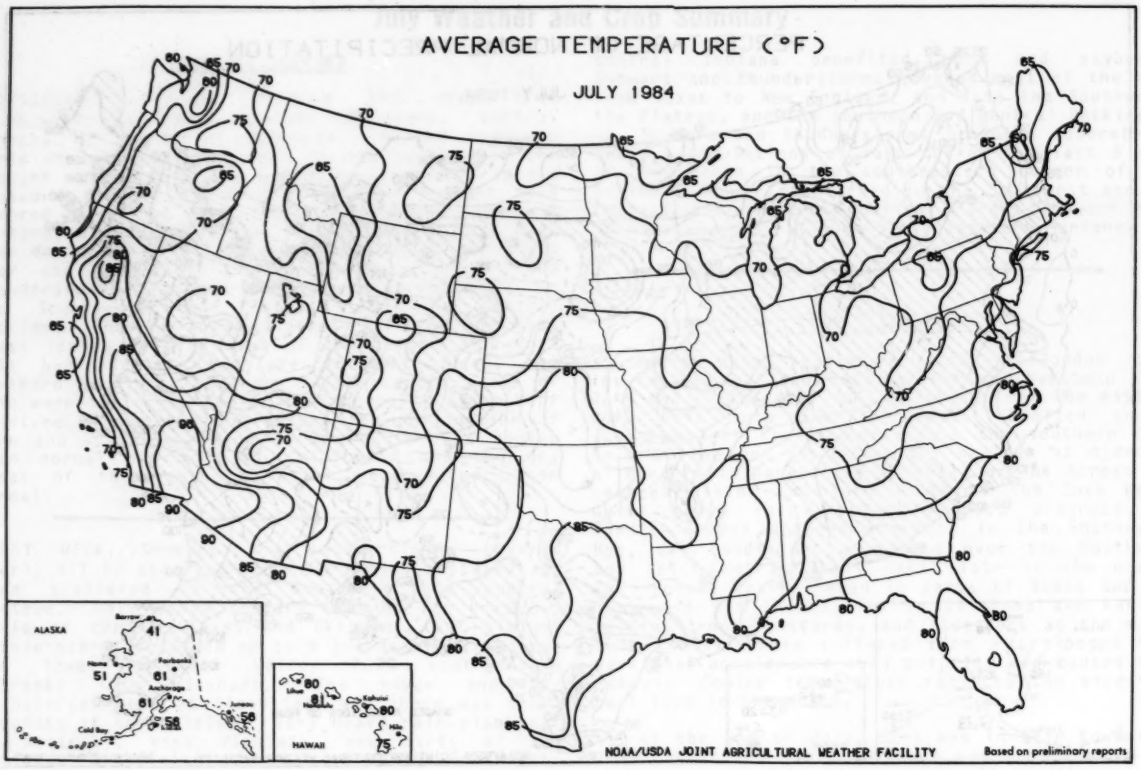
Sorghum was in fair to good condition. However, hot, dry weather in portions of the southern Plains stalled growth in some areas late in the month. Heading advanced to 33 percent completion by July 29, slightly behind normal. Fourty-one percent of the Texas crop was harvested as the month ended.

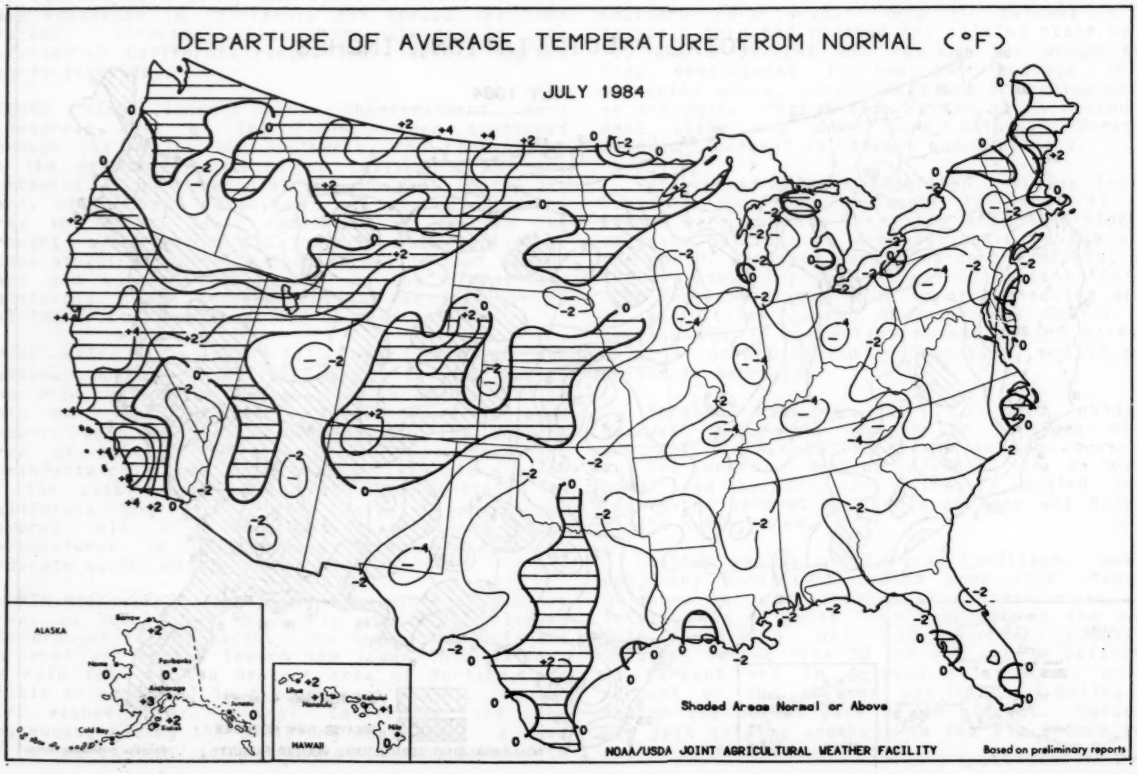
Cotton was in mostly good condition. However, hot, dry conditions caused some poor stands in Oklahoma and some acreage was plowed under. Boll setting was slightly behind normal by the end of July, reaching only 52 percent completion. Progress ranged from 20 percent set in Oklahoma to 91 percent set in Arizona. In Texas, only 37 percent of the acreage was setting bolls, well behind the normal pace of 45 percent. Harvesting was just getting underway in the Rio Grande Valley as the month ended.

(continued on p. 9)


PERCENTAGE OF NORMAL PRECIPITATION
JULY 1984
ALASKA
HAWAII
SHADED AREAS 100% OR MORE
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


TOTAL PRECIPITATION, INCHES
JULY 1984
ALASKA
HAWAII
GREATER THAN 4 INCHES
GREATER THAN 12 INCHES
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (°F)
JULY 1984
ALASKA
HAWAII
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
JULY 1984
ALASKA
HAWAII
Shaded Areas Normal or Above
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Temperature and Precipitation Data for July 1984

States and Stations	Temperature °F Average	Temperature °F Departure	Precipitation Inches Total	Precipitation Inches Departure
AL BIRMINGHAM	78	-2	4.6	-0.8
MOBILE	80	-2	2.4	-5.4
MONTGOMERY	80	-2	4.6	-0.2
AK ANCHORAGE	61	3	1.1	-0.9
BARROW	41	2	0.8	-0.1
FAIRBANKS	61	-1	2.9	1.1
JUNEAU	56	0	5.8	1.6
KODIAK	56	2	3.0	-1.0
NOME	51	0	3.3	1.1
AZ FLAGSTAFF	66	0	4.2	1.7
PHOENIX	92	0	5.1	4.4
PRESCOTT	74	1	4.5	1.3
TUCSON	84	-2	2.9	0.5
WINSLOW	77	-2	2.2	1.1
YUMA	92	-1	2.1	1.9
AR FORT SMITH	81	-1	3.3	0.2
LITTLE ROCK	80	-2	2.9	-0.7
CA BAKERSFIELD	85	0	T	0.0
EUREKA	58	2	T	-0.1
FRESNO	87	6	0.0	0.0
LOS ANGELES	71	2	0.0	0.0
RED BLUFF	85	3	T	-0.1
SACREMENTO	78	3	0.0	0.0
SAN DIEGO	77	7	0.2	0.2
SAN FRANCISCO	66	4	T	0.0
CO DENVER	75	2	2.1	0.2
GRAND JUNCTION	78	-1	0.6	0.1
PUEBLO	78	1	4.2	2.4
CT BRIDGEPORT	73	-1	6.5	3.0
HARTFORD	71	-2	4.3	1.2
DC WASHINGTON	76	-3	4.1	0.2
FL APALACHICOLA	78	-3	18.1	11.0
DAYTONA BEACH	79	-2	6.7	1.2
FT. MYERS	82	-1	9.0	0.4
JACKSONVILLE	80	-1	6.0	-0.6
KEY WEST	83	-2	3.3	-0.4
MIAMI	82	0	7.5	1.5
ORLANDO	81	-1	6.9	-0.9
TALLAHASSEE	80	-1	9.8	1.0
TAMPA	81	0	7.2	-0.2
WEST PALM BEACH	81	-1	7.4	1.4
GA ATLANTA	77	-2	11.2	6.5
AUGUSTA	80	-1	7.7	3.3
MACON	80	-1	13.6	9.1
SAVANNAH	81	0	7.9	0.5
HI HILO	75	0	6.6	-2.2
HONOLULU	81	1	0.2	-0.3
KAHULUI	80	1	0.1	-0.3
LIHUE	80	2	1.3	-0.7
ID BOISE	74	-1	0.2	-0.1
LEWISTON	75	1	0.3	-0.2
POCATELLO	70	-1	2.3	1.9
IL CAIRO	79	-2	5.8	1.8
CHICAGO	70	-3	3.1	-0.5
MOLINE	73	-2	4.6	-0.2
PEORIA	73	-2	5.0	1.1
QUINCY	75	-2	4.9	0.6
ROCKFORD	71	-2	2.9	-1.6
SPRINGFIELD	75	-2	3.5	0.0
IN EVANSVILLE	76	-3	1.5	-2.5
FORT WAYNE	72	-1	2.5	-0.9
INDIANAPOLIS	72	-3	4.8	0.5
SOUTH BEND	72	-1	1.8	-1.9
IA DES MOINES	76	0	6.2	3.0
DUBUQUE	71	-1	2.3	-2.0
SIOUX CITY	74	-2	2.6	-0.8
WATERLOO	70	-2	5.9	1.2
KS CONCORDIA	80	1	0.1	-3.2
DODGE CITY	82	2	0.6	-2.4
GOODLAND	74	-2	3.3	0.9
TOPEKA	77	-2	1.7	-2.3
WICHITA	82	1	0.3	-3.3
KY BOWLING GREEN	74	-4	5.4	1.1
JACKSON	73	-1	6.7	1.8
LEXINGTON	73	-3	4.8	-0.1
LOUISVILLE	75	-2	6.9	2.8
LA ALEXANDRIA	80	-3	2.3	-2.5
BATON ROUGE	80	-2	5.0	-2.1
LAKE CHARLES	81	-1	5.4	-0.2
NEW ORLEANS	79	-3	3.9	-2.9
SHREVEPORT	81	-2	2.2	-1.3
ME CARIBOU	66	1	4.5	0.5
PORTLAND	70	2	3.9	1.0
MD BALTIMORE	74	-3	3.2	-0.7
SALISBURY	76	-1	5.3	0.8
MA BOSTON	75	1	4.4	1.7
CHATHAM	67	-1	8.0	5.1
MI ALPENA	66	0	2.4	-0.7
DETROIT	71	-1	0.9	-2.2
FLINT	70	0	3.4	0.6
GRAND RAPIDS	70	-1	2.2	-0.8
HOUGHTON LAKE	66	-2	4.3	1.0
LANSING	70	-1	2.6	-0.1
MARQUETTE	63	-1	1.9	-1.3
MUSKEGON	68	-2	2.5	0.1
SAULT STE. MARI	63	-1	2.3	-0.8
MN ALEXANDRIA	71	1	2.3	-0.8
DULUTH	67	2	1.3	-2.6
INT'L FALLS	65	-1	2.2	-1.7
MINNEAPOLIS	72	-1	3.0	-0.5
ROCHESTER	68	-3	3.4	-0.5
ST. CLOUD	70	0	2.9	-0.5
MS GREENWOOD	79	-3	4.2	-0.3
JACKSON	81	-1	3.1	-1.4
MERIDIAN	78	-3	6.2	0.9
MO COLUMBIA	75	-3	5.3	1.8
KANSAS CITY	76	-3	3.1	-1.3
SAINT LOUIS	78	-1	0.8	-2.8
SPRINGFIELD	77	-1	2.5	-1.1
MT BILLINGS	74	2	0.3	-0.5
GLASGOW	75	4	T	-1.6
GREAT FALLS	70	1	T	-1.1
HAVRE	71	1	T	-1.2
HELENA	70	2	0.1	-0.9
KALISPELL	66	0	0.5	-0.4
MILES CITY	77	2	0.2	-1.3
MISSOULA	67	0	0.4	-0.4
NE GRAND ISLAND	77	0	2.0	-0.7
LINCOLN	78	0	1.4	-1.8
NORFOLK	75	-1	2.3	-0.9
NORTH PLATTE	74	0	1.0	-2.0
OMAHA	76	0	1.2	-2.3
SCOTTSBLUFF	75	1	1.8	-0.1
VALENTINE	74	-1	6.6	4.2
NV ELKO	72	2	1.0	0.7
ELY	67	0	2.1	1.4
LAS VEGAS	88	-2	2.6	2.1
RENO	73	3	0.5	0.1
WINNEMUCCA	72	0	1.7	1.6
NH CONCORD	68	-1	4.4	1.5
NJ ATLANTIC CITY	75	1	4.4	0.3
NM ALBUQUERQUE	79	0	1.1	-0.2
CLOVIS	76	-1	5.2	2.4
ROSWELL	79	-2	0.8	-0.6
NY ALBANY	69	-3	4.0	1.0
BINGHAMTON	68	-1	5.4	2.0
BUFFALO	70	-1	1.4	-1.6
NEW YORK	74	-2	5.8	2.1
ROCHESTER	69	-2	1.9	-0.6
SYRACUSE	68	-3	3.6	-0.2
NC ASHEVILLE	71	-2	5.9	1.4
CHARLOTTE	76	-3	6.0	2.0
GREENSBORO	74	-3	12.7	7.4
HATTERAS	78	-1	5.2	-0.1
NEW BERN	81	1	9.1	2.3
RALEIGH	75	-3	9.2	4.8
WILMINGTON	78	-2	9.0	1.5
ND BISMARCK	70	0	0.8	-1.2
FARGO	71	0	0.6	-2.7
GRAND FORKS	69	0	2.0	-0.9
WILLISTON	73	3	0.9	-0.9
OH AKRON-CANTON	70	-2	3.0	-1.0
CINCINNATI	73	-2	2.6	-1.7
CLEVELAND	69	-3	3.4	0.0
COLUMBUS	71	-3	3.2	-0.9
DAYTON	70	-5	2.4	-1.0
TOLEDO	70	-2	2.3	-0.9
YOUNGSTOWN	68	-2	4.2	0.2
OK OKLAHOMA CITY	82	0	0.3	-2.7
TULSA	82	-1	0.5	-3.0
OR ASTORIA	60	0	0.1	-1.0
BURNS	67	-2	0.5	0.1
MEDFORD	74	1	0.2	-0.1
PENDLETON	73	-1	0.1	-0.2
PORTLAND	69	1	T	-0.5
SALEM	66	-1	0.4	0.0
PA ALLENTOWN	73	-1	9.2	5.0
ERIE	70	1	1.9	-1.4
HARRISBURG	74	-2	3.8	0.5
PHILADELPHIA	74	-3	7.0	3.1
PITTSBURGH	69	-3	3.0	-0.8
SCRANTON	71	0	5.1	1.7
RI PROVIDENCE	71	-2	5.2	2.1
SC CHARLESTON	80	-1	4.9	-2.5
COLUMBIA	79	-2	8.7	3.3
FLORENCE	78	-3	7.6	1.9
GREENVILLE	76	-3	13.6	9.5
SD ABERDEEN	71	-1	2.6	0.2
HURON	74	0	1.8	-0.4
RAPID CITY	72	-1	1.6	-0.5
SIOUX FALLS	74	0	1.6	-1.1
TN CHATTANOOGA	76	-3	6.3	1.7
KNOXVILLE	73	-5	9.1	4.8
MEMPHIS	81	-1	4.6	0.6
NASHVILLE	76	-3	6.6	2.8
TX ABILENE	84	0	1.0	-1.1
AMARILLO	76	-3	0.8	-1.9
AUSTIN	85	0	1.4	-0.4
BEAUMONT	81	-2	3.9	-1.5
BROWNSVILLE	84	0	1.6	0.1
CORPUS CHRISTI	83	-2	0.2	-1.3
DEL RIO	86	0	0.9	-0.8
EL PASO	81	-2	0.7	-0.9
FORT WORTH	86	0	0.4	-1.6
GALVESTON	85	2	1.8	-2.0
HOUSTON	82	-1	3.4	0.1
LUBBOCK	78	-1	0.5	-1.8
MIDLAND	81	-1	0.8	-0.9
SAN ANGELO	82	-2	0.6	-0.6
SAN ANTONIO	85	0	0.0	-1.9
VICTORIA	85	0	1.0	-1.5
WACO	86	0	1.8	0.0
WICHITA FALLS	85	-1	0.9	-1.1
UT BLANDING	73	-1	1.4	0.3
MILFORD	73	-1	1.7	1.1
CEDAR CITY	74	0	2.2	1.1
SALT LAKE CITY	78	2	1.7	1.0
VT BURLINGTON	70	0	5.1	1.7
VA NORFOLK	77	-1	7.6	2.4
RICHMOND	76	-2	3.6	-1.6
ROANOKE	73	-3	4.2	0.7
WA COLVILLE	68	0	0.5	-0.2
QUILLAYUTE	59	0	0.6	-1.8
SEATTLE-TACOMA	65	0	0.2	-0.6
SPOKANE	69	-1	0.1	-0.4
WALLA WALLA	76	0	0.0	-0.4
YAKIMA	71	0	0.1	0.0
WV BECKLEY	67	-2	8.6	4.2
CHARLESTON	73	-2	4.3	-1.1
HUNTINGTON	73	-2	3.3	-1.2
PARKERSBURG	73	-1	2.1	-2.4
WI GREEN BAY	69	-1	3.2	-0.1
LA CROSSE	71	-2	3.0	-0.8
MADISON	70	-1	2.0	-1.8
MILWAUKEE	72	1	3.4	-0.1
WAUSAU	68	-1	7.5	3.6
WY CASPER	70	-1	2.3	1.2
CHEYENNE	68	-1	2.6	0.7
LANDER	73	2	1.5	0.8
SHERIDAN	71	1	0.4	-0.5
PR SAN JUAN	83	1	2.7	-2.2

National Agricultural Summary

July 30 to August 5

HIGHLIGHTS: Light shower activity left soil moisture further depleted from the southern Plains through most of the Corn Belt, however, cool weather limited evaporation. Heavy rains delayed fieldwork in the Southeast. Warmer than normal temperatures advanced small grain maturity across much of the northern third of the Nation, but cool weather slowed crop development elsewhere. Soil moisture supplies were short to adequate across the Nation, except in portions of the southern Plains where very dry conditions persisted. Farmers had 5 to 7 days available for fieldwork in all regions, except the Southeast where wet conditions left only 1 to 4 days suitable.

Winter wheat combining reached 87% completion, equaling both last year and the average. Harvesting was centered in northern producing areas. Spring wheat harvesting was only 8% finished, 6 points behind last year and the average. Eighty-three percent of the corn acreage was silking and 19% reached the dough stage. Fields across the South were mostly in the dent stage and many were mature. Harvesting got underway between showers in the Southeast. Soybeans were blooming on 74% of the acreage and were setting pods on 37%. Cotton was squaring on 95% of the acreage and 67% of the acreage was setting bolls. Sorghum headed on 45% of the acreage. Rice was 43% headed and harvesting increased in Louisiana and Texas, reaching 20% and 12%, respectively. Vegetable growers prepared for fall planting between showers in the East. Pastures and ranges were rated in fair to mostly good condition. However, persistent dryness in portions of the southern Plains caused poor grazing conditions and continued culling of herds.

SMALL GRAINS: Winter wheat combining in the 15 major producing States advanced to 87% completion, equal to last year and the average. Harvesting was finished in all but the northern States. Harvesting was 40% complete in Montana, 38% finished in Oregon, 35% finished in Washington, and 8% complete in Idaho. In the Corn Belt, producers plowed wheat stubble in preparation for fall seeding of small grains. Indiana growers had plowed 8% of their acreage.

Combining of spring wheat was active in all major producing States but light showers slowed harvest progress in some areas. In the 5 major producing States, 8% of the acreage was combined, compared with 14% for last year and the average. Progress was behind in all States except Montana, ranging from 2% finished in Idaho to 28% complete in South Dakota.

CORN: Corn was in mostly good to excellent condition in some areas of the Corn Belt and Southeast, and fair to mostly good elsewhere across the Nation. In the 17 major producing States, corn was silking on 83% of the acreage and was in the dough stage on 19% of the acreage. Last year, 79% was silking and 19% had reached the dough stage. In the eastern Corn Belt, 86% was silking and 22% was in the dough stage, compared with the averages of 84% and 31%, respectively. In the western Corn Belt development also lagged normal. Only 82% was silking, and 10% was in the dough stage, 1 and 6 points behind schedule, respectively. Southern corn fields had generally dented, but cold, wet weather slowed maturity. Harvesting was 9% complete in Georgia, trailing the 19% average for this date.

SOYBEANS: Soybeans were in fair to mostly good condition. Widespread rains from the Delta States through the Southeast left ample soil moisture for crop development. However, portions of the southern Corn Belt need more moisture for good development. In the 18 major producing States, 74% of the crop was blooming and 37% was setting pods, compared with 70% blooming and 34% setting pods a year ago. Development lagged slightly behind normal, except in the western Corn Belt where progress was slightly ahead of schedule.

SORGHUM: Sorghum continued in fair to good condition. Dry conditions continued to stress stands across much of the southern Plains while the crop made good progress elsewhere. In the 7 major producing States, 45% of the sorghum had headed, slightly ahead of last year but 2 points behind normal. Harvesting was active in Texas where 48% of the crop was harvested, compared with the 45% average. Scattered showers slowed progress along the upper coast but harvesting moved ahead rapidly in other southern areas of the State.

COTTON: Cotton continued in mostly good condition. In the 14 major producing States, 95% of the acreage was squaring, and 67% was setting bolls. A year ago, 96% had squared, and 61% was setting bolls. Southern Plains producers actively sprayed for increasing bollworm populations. Bolls began opening in southern parts of the Texas Blacklands. Recent showers improved dryland crop prospects, however, excessively dry areas still exist in that State. Five percent of the Texas crop had been harvested, ahead of the 2% average.

OTHER CROPS: Peanuts continued in fair to mostly good condition. However, southeastern growers were concerned about possible disease problems from the prolonged wet conditions. Dryland peanuts in south-central Texas need more moisture for development. Pegging was complete in Georgia.

Tobacco growers continued topping and harvesting their crop. The Georgia and South Carolina crops were 51% and 53% harvested, respectively. In North Carolina, flue-cured tobacco was 22% harvested, while in Virginia 9% had been cut. Blue mold began appearing in parts of Maryland and Virginia. Kentucky tobacco was rated mostly good with half the crop blooming.

In the five major rice producing States, 43% of the crop was headed, slightly behind normal. Harvesting was 20% complete in Louisiana and 12% finished in Texas.

VEGETABLES: Summer vegetable harvesting was slowed by widespread showers in northern areas. Land preparation and seeding of fall vegetables were also delayed in most areas. Florida producers transplanted peppers and tomatoes. California growers harvested moderate volumes of broccoli and light supplies of artichokes, cauliflower, and lettuce. Melon and tomato harvesting was very active.

FRUITS AND NUTS: New York growers began picking some early apple and peach varieties. Tart cherry harvesting was 85% finished in Michigan and nearly complete in New York. Florida's citrus trees were in very good condition. Some frozen trees were recovering after pruning and fertilizing. Some groves that were not pruned or fertilized remain in poor condition. California producers harvested apples, table grapes, wine grapes, kiwifruit, nectarines, peaches, pears, plums, summer grapefruit, Valencia oranges, lemons, and almonds.

(continued on p. 8)

CROP PROGRESS

FOR WEEK ENDING AUG 5

WINTER WHEAT
% HARVESTED

	1984	1983	AVG.
CALIF	99	99	99
COLO	85	88	91
IDAHO	8	9	12
ILL	100	100	100
IND	100	100	100
KANS	100	100	100
MO	100	100	100
MONT	40	20	15
NEBR	95	96	96
OHIO	100	100	100
OKLA	100	100	100
OREG	38	67	51
S DAK	87	87	90
TEX	100	100	100
WASH	35	45	42
15 STATES	87	87	87

THESE 15 STATES PRODUCED 84% OF THE 1983 WINTER WHEAT CROP.

COTTON
% SQUARING

	1984	1983	AVG.
ALA	100	100	100
ARIZ	100	100	100
ARK	100	100	100
CALIF	100	98	100
GA	99	100	100
LA	100	96	99
MISS	100	100	100
MO	100	95	100
N MEX	100	98	99
N C	93	91	93
OKLA	90	90	80
S C	100	100	100
TENN	100	100	100
TEX	91	95	95
14 STATES	95	96	97

THESE 14 STATES PRODUCED 99% OF THE 1983 COTTON CROP.

COTTON
% SETTING BOLLS

	1984	1983	AVG.
ALA	84	76	84
ARIZ	96	99	98
ARK	97	96	96
CALIF	85	65	76
GA	80	96	98
LA	93	66	88
MISS	70	61	79
MO	98	57	75
N MEX	95	66	72
N C	81	70	78
OKLA	35	25	25
S C	88	99	97
TENN	67	54	77
TEX	53	55	63
14 STATES	67	61	71

THESE 14 STATES PRODUCED 99% OF THE 1983 COTTON CROP.

SPRING WHEAT
% HARVESTED

	1984	1983	AVG.
IDAHO	2	2	6
MINN	10	15	13
MONT	5	5	0
N D	3	12	9
S DAK	28	37	54
5 STATES	8	14	14

THESE 5 STATES PRODUCED 94% OF THE 1983 SPRING WHEAT CROP.

SORGHUM
% HEADED

	1984	1983	AVG.
COLO	19	11	18
KANS	25	15	20
MO	68	54	52
NEBR	30	40	50
OKLA	60	25	40
S DAK	18	24	34
TEX	70	73	78
7 STATES	45	42	47

THESE 7 STATES PRODUCED 85% OF THE 1983 SORGHUM CROP.

RICE
% HEADED

	1984	1983	AVG.
ARK	18	19	22
CALIF	20	5	22
LA	76	60	72
MISS	36	28	39
TEX	100	100	100
5 STATES	43	37	44

THESE 5 STATES PRODUCED 98% OF THE 1983 RICE CROP.

RICE
% HARVESTED

	1984	1983	AVG.
ARK	0	0	0
CALIF	0	0	0
LA	20	2	16
MISS	0	0	0
TEX	12	16	45
5 STATES	5	3	10

THESE 5 STATES PRODUCED 98% OF THE 1983 RICE CROP.

SOYBEANS
% BLOOMING

	1984	1983	AVG.
ALA	54	56	62
ARK	39	27	31
GA	59	60	70
ILL	89	88	86
IND	90	85	80
IOWA	88	91	87
KANS	70	50	45
KY	58	37	52
LA	68	51	62
MICH	80	85	80
MINN	91	93	91
MISS	60	50	67
MO	65	65	59
NEBR	80	90	80
N C	43	36	42
OHIO	85	80	80
S C	32	36	50
TENN	65	47	58
18 STATES	74	70	71

THESE 18 STATES PRODUCED 93% OF THE 1983 SOYBEAN CROP.

SOYBEANS
% SETTING PODS

	1984	1983	AVG.
ALA	28	22	33
ARK	24	14	17
GA	25	28	35
ILL	55	54	52
IND	30	30	30
IOWA	62	60	58
KANS	35	20	25
KY	16	9	16
LA	42	24	37
MICH	25	30	28
MINN	43	38	39
MISS	16	11	28
MO	28	28	29
NEBR	35	45	45
N C	12	14	15
OHIO	35	35	50
S C	11	8	14
TENN	15	8	25
18 STATES	37	34	37

THESE 18 STATES PRODUCED 93% OF THE 1983 SOYBEAN CROP.

CORN
% SILKING

	1984	1983	AVG.
COLO	73	50	59
GA	100	100	100
ILL	96	92	96
IND	90	85	80
IOWA	86	87	90
KANS	95	70	75
KY	83	59	80
MICH	75	75	80
MINN	83	77	80
MO	80	78	81
NEBR	85	80	85
N C	98	95	95
OHIO	75	80	80
PA	44	48	58
S DAK	51	53	66
VA	84	83	87
WIS	72	63	68
17 STATES	83	79	83

THESE 17 STATES PRODUCED 90% OF THE 1983 CORN CROP.

CORN
% DOUGH

	1984	1983	AVG.
COLO	15	1	7
GA	94	98	98
ILL	37	34	50
IND	15	30	35
IOWA	12	6	16
KANS	30	10	30
KY	14	4	21
MICH	5	5	11
MINN	2	2	2
MO	34	35	47
NEBR	8	15	20
N C	74	79	80
OHIO	15	20	20
PA	6	3	7
S DAK	2	5	3
VA	45	52	56
WIS	14	9	0
17 STATES	19	19	25

THESE 17 STATES PRODUCED 90% OF THE 1983 CORN CROP.

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by SRS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures average 5 to 10° below normal. Rainfall 0.30 to 10.58 in.

Soil moisture adequate to surplus over most of State. Fieldwork: 1.7 days. Corn dented 72%, 72% 1983, 80% average. Corn mature 41%, 30% 1983. Soybeans blooming 54%, 56% 1983, 62% average. Soybeans setting pods 28%, 22% 1983, 33% average. Cotton squaring 100%, 100% 1983, 100% average. Cotton setting bolls 84%, 76% 1983, 84% average. Activities: Corn harvest and routine care of livestock and poultry. Conditions: corn, soybeans, cotton, sorghum, pasture and livestock mostly good; peanuts good.

ALASKA: State mostly cloudy, except one day sunny weather. Late week, southern areas of State. Daytime temperatures in 60's and 70's, near normal. Precipitation fell early, late, heavier amounts in northern areas.

Cloudy, humid, intermittant sunshine, showers prevailed over Railbelt. Up to 4.0 days to complete first cutting hay harvest. Harvest 90% to complete, most areas, 50% elsewhere. Second crop brome heights, 10 to 24 in. Small grains good condition, early dough stage or beyond, 50% early fields showing color. Light, moderate wind, rain damage caused lodging. Potatoes, 80 to 100% blooming. Abundant supply of vegetables available, local markets. Soil moisture adequate.

ARIZONA: The atmosphere dried out considerably, marked decrease in shower, thunderstorm activity compared to last two weeks. Rainfall amounts mostly 0.10 to 0.75 in. except locally over 1.00 in. Central Basin, White Mountains; practically none southwest quarter. Gradual increase of daytime temperatures, reaching lower 80's in mountains, 90's at 5,000 ft. level, 108 to 114° lower deserts. Average temperatures varied 5° below normal to 4° above.

Cotton 96% setting bolls, 99% last year, 98% average. Rains, high humidity caused some shedding of squares, effects reduced by lower maximum temperatures. Cultivation delayed by rains, made weed control problem some areas. Insect problems were also increasing. Crop condition average to above average. Alfalfa hay harvest active, some delays by rain. Trading slow, most growers stacking current harvest. Rain, high humidity caused some growers to green chop rather than cut for hay. Corn, sorghum mostly good condition. Watermelon harvest practically finished Salt River Valley, picking expected to start Willcox area by 15th. Few new crop lemons picked, some packing expected to start by 13th. Citrus groves good condition, new crop fruit developing normally.

ARKANSAS: Thunderstorms brought cool temperatures and moisture late in the week. High 98°, low 50°. Rainfall occurred generally east and south. Most rain 3.35 in., least 0.07 in.

Soil moisture short northeast and west, adequate central and south. Days suitable for fieldwork: 6.2. Crop growth moderate, but improving. Rice good condition; headed 18%, 19% 1983, 22% average; none harvested, same as 1983 and average. Cotton good condition; setting bolls 97%, 96% 1983 and average. Soybeans good to fair condition; blooming 39%, 27% 1983, 31% normal; setting pods 24%, 14% 1983, 17% average. Corn and sorghum good condition. Pastures below average but improving. Cattle good condition.

CALIFORNIA: Temperatures were narrowly mixed about the weekly mean statewide as most areas showed departures above and below local means. The south coast, southeast interior, and northern Sierra, however, were uniformly warmer than normal. Precipitation was confined to the desert areas and the central Sierra with the largest total in the Sierra. The trend toward cooler temperatures continued in the Sacramento Valley and the San Joaquin averaged out to the season normal.

Small grains near harvest, north mountain areas. Winter wheat 99% harvested, 99% last year, 99% average. Some rice varieties heading: 20% headed, 5% last year, 22% average. Some weed problems. Sugarbeets harvested, some areas complete. Cotton doing well, 100% squared, 98% last year, 100% average; 85% setting bolls, 65% last year, 76% average. Irrigation, spraying continued. Field corn cut for silage. Safflower drying continued. Early blackeyes ready for harvest. Late planted setting runners. Harvest Gravenstein apples continues, maturity 10 days ahead of normal. Table grape harvest continues with Thompson, Flame Seedless. Maturity less of problem crush wine grapes begun with Thompsons. Kiwifruit vines treated hoppers. Nectarine crop 80% harvested. Harvest Clingstone peaches ahead normal, approximately one-third complete. Cooler weather slowing maturity some varieties. Freestone peach harvest three-fourths complete. Harvest pears fresh market, processing continues. Plum harvest nearing completion, 10% left. Early pomegranates reaching maturity, fruit size small. Harvest summer grapefruit, Valencia oranges, southern coastal lemons continues. Recent cool weather on coast relief. Almond harvest begun with early varieties. Growers preparing the ground mite, busk fly control continues walnuts. Artichoke volume seasonally light. Broccoli moderate supply central coast. Cantaloupe harvest fairly heavy San Joaquin Valley, west Riverside County. Planting active desert. Cauliflower harvest light. Celery light supply central coast. Honeydew, miscellaneous melon harvest active central interior valleys. Lettuce harvest lighter central coast. Summer potato harvest active west Riverside. Market tomato harvest active San Joaquin Valley, south coast. Planting fall crop continued. Processing tomato harvest past peak westside district, very active Sacramento Valley. Mountain range, pasture conditions good. Foothill range condition, stock water supplies continue decline. Supplemental feeding low foothill districts active. Bee hives being moved from alfalfa seed fields.

COLORADO: Scattered showers and thunderstorms occurred about everyday except in the east plains. localized heavy rains produced as much as 2.00 in. Temperatures within 2° of normal.

Winter wheat harvest slowing down at 85% complete statewide; 1983 88%; average 91%. The western slope only 25% harvested. Corn condition very good; silking at 73%; 1983 50%, average 59%, 15% in dough stage; 1983 1%; average 7%. Sorghum condition good; 19% headed; 1983 11%, average 18%. Barley condition good with 30% harvested; 1983 35%, average 39%. Spring wheat condition very good, and 8% harvested; 1983 5%, averafe 19%. Alfalfa condition good; 2nd cutting 56% complete; 1983 56%, average 59%. Summer potato condition good;

harvest at 9%, 1983 5%, average 14%. Dry bean condition good; 69% flowered; 1983 57%, average 64%.

FLORIDA: High pressure continued with warm very moist unstable tropical air anchored firmly in place. Southeasterely flow brought showers and thunderstorms early along east coast, continued march across State, arriving over west coast areas by late afternoon. NOrth and Panhandle had spotty thunderstorms during day. Rainfall amounts extremely variable, many locations received 2.00 to 4.00 in. during this period.

Numerous thunderstorms continued field crops areas. Fieldwork curtailed due to wet fields. Corn in fair condition. Harvest continues. Soybeans growing rapidly, early beans setting pods. Peanuts, cotton, in good condition. Tobacco harvest nearing completion most areas. Insects a problem some hay fields. Frequent rains interrupted cutting. Sugarcane in good condition. Pasture conditions were mostly good to excellent during the week. Cattle continue to improve and in good to excellent condition. Healthy citrus trees very good condition. Some frozen trees recovering after pruning with cultural care; many acres fertilized and not pruned; some groves not fertilized or pruned look poor at this time. Moisture adequate. Hot days, warm nights, thundershowers continue vegetable growing areas. Land preparation fall plantings active. Some celery seed beds underway. Cabbage seed bed preparation started. Plantings, transplanting peppers, tomatoes in progress. Summer vegetable harvest continues for local markets, volume limited.

GEORGIA: Wet and cool weather prevailed first half of week. Rainfall totals mostly over 2.00 in. with more than 5.00 in. some locations. Average temperatures below normal. Daytime readings held to 70's early in week. Warm with only scattered thundershowers 3rd through 5th.

Soil moisture 88% surplus, 12% adequate. Average days suitable for fieldwork 0.9. Soggy field activity almost at standstill. Continuing active spraying for weeds, insects, and disease. Cutting hay and harvesting corn and tobacco but warm showers. Corn silked 100% this year, last year and average; dough 94%, 98% last year and average; dent 79%, 83% last year, 90% average; mature 52%, 57% last year, average 74%; 9% harvested, 7% last year, average 9%; condition 9% excellent, 63% good, 22% fair, 6% poor. Cotton squaring 99%, 100% last year and average; setting bolls 80%, 96% last year, average 98%; bolls open 1% this year and last, average 6%; condition 14% excellent, 70% good, 14% fair. Peanuts pegging 100%, 99% last year, and average; condition 23% excellent, 74% good. White mold and corn rootworm causing some concern in peanuts. Soybeans blooming 59%, 60% last year, average 70%; setting pods 25%, 28% last year, average 35%; condition 16% excellent, 70% good, 11% fair, 3% poor. Tobacco 51% harvested, 60% last year, average 71%; condition 70% good, 25% fair. Grain sorghum 8% excellent, 77% good, 13% fair. Watermelons 84% harvested, 87% last year, average 91%; conditon 57% good, 32% fair, 9% poor. Apples 25% picked, 26% last year, average 28%; condition 7% excellent, 69% good, 24% fair. Peaches 91% picked, 97% last year, average 96%. Pecans 80% good and 15% fair. Condition 5% excellent, 63% good, 32% fair. Vegetables good to poor. Hay 14% excellent, 39% good, 16% fair, 9% poor. Pasture 21% excellent, 71% good, 7% fair. Cattle 9% excellent, 77% good, 14% fair. Hogs 7% excellent, 81% good, 11% fair.

HAWAII: Warm, sunny conditions again prevailed throughout the Island Chain. Showers were light and mainly restricted to the windward and mountain regions of all islands.

Water restrictions still in effect on Oahu and in the Waimea area of the Big Island. Most crops in fair condition although incidence of insects and diseases have increased. Chinese cabbage production will be moderate. New plantings will be affected by the recently imposed water restrictions in Waimea. Head cabbage supplies will remain heavy and expected to increase slightly next week. Head lettuce output has been somewhat hurt by heat and disease losses, but production will be maintained at previous week's level. Most losses, but production will be maintained at previous week's level. Most other vegetable production will be light to moderate. Papaya production on a seasonal increase. Banana production holding steady.

IDAHO: Scattered showers and varied temperatures dominated the weather picture. Temperatures ranged from 6° above normal in the north to 5° below normal in the southeast. Scattered thundershowers caused precipitation amounts to vary across the tate. The eastern portion of the State received the largest amounts with many weather stations recording over 1.00 in.

Crop development progressed well as 6.0 days were suitable for fieldwork. Winter wheat advanced to 8% harvested compared to 9% last year and 12% average. Spring wheat harvest was just underway at 2% complete versus 2% in 1983 and 6% average. Spring barley reached 6% harvested compared to 5% a year ago and 7% average. Potatoes progressed to 90% closing rows versus 94% in 1983. The second cutting of alfalfa reached 40% harvested. Grasshopper continued to be a problem in the southwestern and south central portions of the State. Soil moisture continued to be in good supply in most areas.

ILLINOIS: Temperatures 3° above normal to 5° below normal. Precipitation 0.00 to 2.13 in.

Soil moistur 31% adequate, 69% short. Corn silked 96%, last year 92%, average 96%; dough 37%, last year 34%, average 50%; dented 3%, last year 4%, average 10%. Corn condition 22% excellent, 56% good, 20% fair, 2% poor. Soybeans blooming 89%, last year 88%, average 86%; setting pods 55%, last year 54%, average 52%. Soybean condition 10% excellent, 56% good, 30% fair, 4% poor. Oats harvested 88%, last year 88%, average 86%. Alfalfa third crop cut 27%, last year 25%, aveage 20%. Alfalfa condition 16% excellent, 60% good, 20% fair, 4% poor. Pasture condition 4% excellent, 33% good, 48% fair, 15% poor. Days suitable for fieldwork: 6.8.

INDIANA: Temperatures averaged 2 to 4° above normal in northern half of State. Normal to 1 or 2° above elsewhere. Rainfall northern half of State averaged 0.0 to 0.50 in., south 0.15 in. to over 1.50 in.

Fieldwork averaged 5.5 days. Topsoil and subsoil moisture short to mostly adequate. Corn condition good. Corn 90% silked, 1983 85%, average 80%. Corn 15% in dough, 1983 30%, average 35%. Soybean condition fair to mostly good. Soybeans 90% in bloom, 1983 85%, average 80%. Soybeans 30% setting pods, 1983 30%, average 35%. Winter wheat 100% harvested, 1983 100%, average 100%. Oats 75% combined, 1983 90%, average 85%. Rye 95% combined, 1983 97%,

average 98%. Wheat land 8% plowed, 1983 8%, average 9%. Alfalfa 91% cut twice, 1983 94%, average 86%. Pasture fair.

IOWA: Warm dry week.

Days suitable for fieldwork: 6.6. Corn 95% tasseling, 96% last year, 96% normal. Corn condition 34% excellent, 49% good, 15% fair, 2% poor to very poor. Corn acreage silking 86% complete; 87% last year; 90% normal. Corn in or past milk stage 38% complete, 32% last year; 45% normal. Corn acreage in dough stage 12%, 6% last year, 16% normal. Soybean crop condition 17% excellent, 62% good, 17% fair, 4% poor to very poor. Soybean acreage bloomed 88% complete; 91% last year, 87% normal. Soybean acreage setting pods 62%, last year 60%, normal 58%. Oat crop condition 21% excellent, 60% good, 13% fair, 6% poor to very poor. Oat acreage harvested 89% complete; 84% last year, 89% normal. Harvesting winter wheat crop 99% complete, 98% last year, 99% normal. Second crop of alfalfa 83% complete, 89% last year, 91% normal. Second crop clover hay harvested 60%, last year 68%, normal 67%. Hay crop condition, 20% excellent, 63% good, 15% fair, 2% poor to very poor. Topsoil moisture conditions 60% adequate, 40% short. Subsoil moisture conditions 1% surplus, 89% adequate, 10% short. Livestock good condition. Pasture conditions 13% excellent, 49% good, 34% fair, and 4% poor to very poor.

KANSAS: Precipitation averaged less than 0.10 in. east, central and west central, 0.34 in. northwest and 0.78 in. southwest. Temperatures averaged 77° southeast and east central and 78 to 83° elsewhere. These were normal to 2° above normal west, central and northeast and 2 to 4° below normal southeast and east central.

Wheat 100% harvested, 100% last year, 100% average. Sorghum 25% headed, 15% last year, 20% average. Greenbugs persist, severe in some counties of northwest, west central and northeast districts. Corn 95% silked, 70% last year, 75% average. Corn 30% dough, 10% last year, 30% average. European corn borer prevalent in southwest district. Soybeans 70% blooming, 50% last year, 45% average; 35% setting pods, 20% last year, 25% average. Topsoil moisture, subsoil being depleted. Pasture and rangeland deteriorating. Days suitable for fieldwork: 6.5.

KENTUCKY: Scattered showers were common, total amounts averaged only 0.25 to 0.75 in. Far west wettest. Mostly cloudly skies with temperatures ranging from 60's for lows to 80's for highs, few places reached 90. Readings for week averaged 1 to 4° below normal.

Soil moisture 59% adequate, 40% short, 1% surplus. Corn mostly good; 83% silked or beyond, 59% last year, 80% average; 14% dough stage or beyond, 4% last year, 21% average. Soybeans mostly good, 58% blooming or beyond, 37% last year, 52% average. Pods set 16% acreage, 9% last year, 16% average. Tobacco mostly good. Burley 50% blooming, 26% last year. Burley 14% topped. Dark tobacco over 50% blooming. Hay acreage and pastures fair to good.

LOUISIANA: Rainfall amounts ranged from 2.00 to over 4.00 in. south, a trace to 2.00 in. central, and 0.50 to about 3.00 in. north. Temperatures averaged between 4 to 6° below normal. High 93°, low 61°.

Soil moisture adequate. Days suitable for fieldwork: 5.1. Activities included harvesting corn, rice, vegetables, sweetpotatoes, and peaches, and fungicide and insecticide application. Rice headed 76% 1984, 60% 1983, 72% average; ripe 26% 1984, 8% 1983, 27% average; harvested 20% 1984, 2% 1983, 16% average; condition good. Corn dough stage 96% 1984, 92% 1983, 95% average; mature 62% 1984, 48% 1983, 64% average; harvest 9% 1984, 9% 1983, 21% average; condition good. Cotton squaring 100% 1984, 96% 1983, 99% average; setting bolls 93% 1984, 66% 1983, 88% average; condition good. Soybean blooming 68% 1984, 61% 1983, 62% average; setting pods 42% 1984, 24% 1983, 37% average; condition good. Sorghum headed 93% 19894, 85% 1983, 88% average; turning color 62% 1984, 48% 1983, 54% average; ripe 10% 1984, 4% 1983, 19% average; harvested 3% 1984, condition good. Sweetpotatoes harvested 6% 1984, 2% 1983, 8% average; condition good. Vegetable condition fair to good. Peaches harvested 92% 1984, 92% 1983, 96% average. Sugarcane condition fair to good. Pasture condition fair to good. Livestock condition good.

MARYLAND AND DELAWARE: Maryland: Mild weather. Most areas were 3° below normal and received about 0.50 in.

Fieldwork averaged 5.0 days. Topsoil and subsoil moisture adequate. Corn mostly good to excellent condition. Corn 85% silked, 1983 80%, average 90%. Corn 40% dough, 1983, 40% average 45%. Corn 0% dent. Soybeans mostly good to excellent condition. Soybeans 40% bloom, 1983 35%, average 50%. Soybeans pod 1%, 1983 15%, average 20%. Tobacco in good condition. Tobacco 35% bloom, 15% topped. Blue mold reported in tobacco. Alfalfa second cutting 95%, 1983 95%, average 95%. Alfalfa third cutting 30%, 1983 20%. Second cutting other hay 75%, 1983 95%, average 95%. Peach harvest 35%, 1983 20%.

Delaware: Temperatures 2° below normal. Rainfall average 0.18 in.

Fieldwork averaged 8.0 days. Topsoil and subsoil moisture adequate. Corn in good condition. Corn silked 80%, 1983 85%, average 90%. Corn 23% dough, 1983 30%, average 55%. Soybeans in good condition. Soybeans 45% bloom, 1983 35%, average 35%. Alfalfa third cutting 50%, 1983 25%, average 40%.

MICHIGAN: Temperatures averaged 3° above normal. Precipitation was moderate to heavy over much of the State. The southern portion of the lower Peninsula continues to experience dry conditions.

Wheat harvest winding down throughout the State. Localized showers brought limited relief to dry conditions in northern counties. The southern half of lower Peninsula very much in need of moisture. Statewide 6.0 days suitable for fieldwork. Winter wheat 95% harvested, 90% last year, 84% average. Oats 15% harvested, 15% last year, 22% average. Corn 75% silked, 75% last year, 80% average. Corn 5% in dough, 5% last year, 11% average. Soybeans 25% setting pods, 30% last year, 28% average. Soybeans 80% blooming, 85% last year, 80% average. Dry beans 20% setting pods, 30% last year, 38% average. Second cut hay 60% complete, 65% last year, 57% average. Sweet cherry harvest 95% complete, on schedule with normal. Tart cherries 85% harvested, 90% last year, 88% average. Vegetable crops continue to progress well throughout the State. The harvest of tomatoes, sweet corn, and cucumbers continue over the State.

MINNESOTA: Warm and dry in the north and warm and humid with isolated thunderstorms in the south. Temperatures averaged 2 to 5° above normal. High: 95°, low: 50°. Precipitation averaged 0.09 to 0.30 in. above normal for west central and central, southwest and south

central, and near normal to 0.45 in. below normal elsewhere. Greatest weekly total: 2.66 in.

Continued dryness in northwest portion of State allowed small grain harvest to proceed rapidly but places stress on row crops. Spring wheat harvest just got underway in main area; barley harvest was at its peak. Oats, barley and winter wheat reported to be high quality. Variety of insect outbreaks were reported but most were scattered and not widespread. Corn condition: 50% poor to fair, 50% good to excellent. Soybean condition: 48% poor to fair, 52% good to excellent. Days suitable for fieldwork: 5.7. Topsoil moisture: 24% very short, 39% short, 37% adequate. Turning ripe: Spring wheat 91%, 1983 91%, normal 81%; oats 97%, 1983 96%, normal 92%; barley 99%, 1983 98%, normal 92%. Harvested: Spring wheat 10%, 1983 15%, normal 13%; oats 36%, 1983 36%, normal 32%; barley 41%, 1983 39%, normal 37%; winter wheat 74%, 1983 61%, normal 50%. Tasseling: Field corn 93%, 1983 88%, normal 91%. In milk: Field corn 24%, 1982 22%, normal 23%. In dough: Field corn 2%, 1983 2%, normal 2%. Blooming: Soybeans 91%, 1983 93%, normal 91%; sunflower 49%, 1983 51%, normal 56%. Setting pods: Soybeans 43%, 1983 38%, normal 39%.

MISSISSIPPI: Scattered thundershowers throughout the State. Greatest rainfall 2.64 in. Average temperatures 5° below normal, extremes 59 and 92°.

Soil moisture adequate. Fieldwork: 4.2 days suitable, 5.5 1983, 5.5 average. Main activities weed and insect control measure. Cotton good; 96% blooming 1984 and average; 70% setting bolls, 61% 1983, 79% average. Soybeans good to fair; 60% blooming, 50% 1983, 67% average; 16% podding, 11% 1983, 28% average. Rice good; 36% headed, 28% 1983, 39% average; 0% harvested 1984, 1983 and average. Corn good to fair; 58% dented, 44% 1983. Sorghum good; 80% headed, 59% 1983. Peach condition good; 86% harvested, 76% 1983, 78% average. Pasture condition fair to good. Hay harvest 64% completed, 71% 1983, 69% average. Watermelon harvest 60% completed; sorghum silage 26%, and corn silage 26% harvested.

MISSOURI: High pressure from the Great Lakes to the central Midwest kept temperatures below normal for the early and middle part of the week. A warming trend had started by weeks end. Rainfall was spotty, occurring in an almost random pattern.

Days suitable for fieldwork: 6.6. Soybeans blooming 65%, 65% last year, 59% normal. Soybeans setting pods 28%, 28% last year and 29% normal. Condition of soybeans 1% excellent, 41% good, 53% fair, 5% poor. Corn tasseled 88%, 92% last year, 94% normal. Corn silking 80%, 78% last year, 81% normal. Dough stage 34%, 35% last year, 47% normal. Condition 2% excellent, 42% good, 50% fair, 6% poor. Grain sorghum headed 68%, 54% last year, 52% normal. Condition 2% excellent, 55% good, 40% fair, 3% poor. Cotton squaring 100%, 95% last year, 100% normal. Cotton setting bolls 98%, 57% last year, 75% normal. Condition 91% good, and 9% fair. Alfalfa hay 2nd cutting 93%, 100% last year, 95% normal. Alfalfa hay 3rd cutting 33%, 36% last year, 32% normal. Other hay harvested 94%, 100% last year, no normal. Condition of pasture 1% excellent, 12% good, 49% fair, 38% poor. Condition of topsoil moisture supply 5% adequate, 95% short.

MONTANA: Warm week as temperatures averaged 2 to 5° above normal. Hottest in extreme east, coolest in southwest. Precipitation variable with some rain over nearly all areas. Parts of north central received no precipitation while others in area received over 3.00 in. at midweek. Rest of State had mostly 0.10 to 0.50 in., with some amounts of 1.00 to 2.00 in.

Topsoil moisture short. Subsoil moisture short except in southwest. Fieldwork, days suitable: 6.5. Crops headed and green or beyond compared with last year and average; winter wheat headed 0, 5, 0; winter wheat turned 15, 40, 45; winter wheat ripe 45, 35, 40; winter wheat harvested 40, 20, 15; spring wheat headed 15, 25, 40; spring wheat turning 55, 50, 45; spring wheat ripe 25, 20, 15; spring wheat harvested 5, 5, 0; barley headed 10, 20, 30; barley turning 45, 55, 50; barley ripe 30, 20, 15; barley harvested 15, 5, 5; oats headed 15, 25, 30; oats turning 50, 45, 45; oats ripe 25, 20, 20; oats harvested 10, 10, 5. Second cutting alfalfa hay 20% complete, last year 25%, average 20%. Range feed and stock water supplies short in north central, central and east. Grasshopper damage moderate over most of State, light in northwest, heavy in northeast.

NEBRASKA: Widely scattered showers first of week west, end of week east. Temperatures averaged 1 to 3° above normal statewide.

Wheat harvested 95%, 96% last year, 96% average. Corn condition mostly good. Irrigated mostly good, non-irrigated mostly good to fair. Corn 85% silking, 80% last year, 85% average. Corn in dough 8%, 15% last year, 20% average. Sorghum condition mostly good to fair; 30% headed, 40% last year, 50% average. Soybeans mostly good to fair condition; 80% soybeans blooming, 90% last year, 80% average. Podding 35%, 45% last year, 45% average. Alfalfa mostly good to fair condition. Second cutting 85% complete, 100% last year, 97% average. Days suitable for fieldwork averaged 6.3. Topsoil moisture mostly short. Subsoil moisture mostly adequate to short.

NEVADA: Considerable thunderstorm activity reported all areas. Precipitation neglible northwest but seasonable amounts fell all other sections. Average temperatures near normal northeast, slightly below elsewhere. Extremes: 105 and 42°.

Potatoes putting on tonnage with warmer night temperature. Small grain harvest moving farther north. Alfalfa hay harvest slowed by showers some localities. Garlic harvest in progress.

NEW ENGLAND: The region was relatively dry during the week with only widely scattered showers and thunderstorms. Average temperatures ranged from the upper 60's in the far north through the 70's elsewhere across the region.

The lack of rainfall has reduced available soil moisture to short - adequate. Days suitable for fieldwork were 6.0. Progress of fieldwork 3.0 days behind normal. Second cut hay 55% complete. Vegetable harvest continues in south and has begun in central New England. Cranberries sizing well, conditions excellent.

NEW JERSEY: Temperatures averaged 1° above normal. Extremes were 50° on the 31st and 93° on the 2nd and 3rd. Weekly rainfall averaged 0.69 in. north, 1.47 in. central and 0.68 in. south. The heaviest 24-hour total was 2.52 in. on the 4th to 5th. Estimated soil moisture, in percent of field capacity, averaged 83% north, 74% central and 52% south. Four inch soil temperatures averaged 74° north, 76° central and 79° south.

Fieldwork: 6.3 days suitable. Harvesting of summer vegetables continues. Fall vegetables crop planting underway. Harvest of the 2nd and

3rd crops of blueberries active. Light harvest of Red Haven peaches has begun. Summer apple variety harvest increasing. Fall apple varieties sizing well. Second and third cuttings of hay progressing well. Wheat harvest winding up. Corn and soybeans remain in good condition.

NEW MEXICO: Average temperatures near or slightly below normal most locations. Minimum temperature: 41°; northwestern plateau and western mountains. Maximum temperature: 99°; southern desert. Scattered thundershowers most days - least activity in southeast plains. Larger rainfall totals over north and west, several locations recorded 1.00 to 2.00 in.

Some hail damage to cotton, grain sorghum east central plains. Soil moisture supplies short. Wheat and barley harvest virtually complete. Corn good to excellent; tasseling. Irrigated, dryland grain sorghum good; heading. Second cutting alfalfa virtually complete. Third cutting continues. Potato harvest continues. Chile rated good. Cattle rated good, sheep good to excellent. Range condition fair to good. Cotton squaring 100%, last year 98%, average 99%; setting bolls 95%, last year 66%, average 72%.

NEW YORK: It was dry most of the week with most of the rainfall in the mid week period. The bulk of the rain was in the west from random and slow moving thunderstorms. Temperatures started out below normal as a rule with a gradual warm up to above normal readings by the end of the week. In addition, there was a gradual increase in humidity. A Bermuda high type pattern developed during the week and it became well established by the end of the week.

Field activities included combining wheat and oats and putting up hay. The corn crop variable and ranges from about knee high to tassling stage. Corn good condition statewide. Small grain harvesting in most areas of the state. Oat harvesting for grain about 6% complete compared to 10% last year and 16% average. Second cutting alfalfa 50% complete behind the 62% last year and the 53% average. Regrowth on alfalfa has been very good with good quality. Dry beans that were planted early were setting pods. Later planted dry beans showing stress from dry wether. Soil moisture short to adequate. An average of 6.0 days were suitable for fieldwork. Tart cherry harvest in its final stages. Early peaches being picked. Apple size and exterior quality looking very good. Harvesting of early apple varieties underway with Lodi an July Reds being picked. The pear crop in good condition with Bartlett harvest about 3 weeks away. Grape crop prospects very good at this time. Vegetable crops with the exception of the Orange County area needed all the rain that fell during the week with most areas needing much, much more. Orange County received record breaking rainall during July. Growers have harvested about one third of their onion transplants. Although the lettuce crop in excellent condition, a poor market and weak demand has caused growers in Oswego County to disk up a large quantity of lettuce. Sweet corn and snap bean harvesting gained momentum while early tomato and cabbage harvesting started in several areas.

NORTH CAROLINA: Temperatures averaged normal along the coast, 3 to 5° below over the rest of the State. Precipitation ranged from 0.26 in. at the coast to 3.07 in. in the mountains.

Soil moisture: 18% adequate, 82% surplus. Days suitable for fieldwork: 3.2. Condition: Tobacco 15% fair, 84% good, 1% excellent. Corn 1% poor, 7% fair, 67% good, 25% excellent. Cotton 17% fair, 83% good. Peanuts 19% fair, 81% good. Soybeans 7% fair, 84% good, 9% excellent. Irish potatoes: 11% fair, 78% good, 11% excellent. Apples 5% poor, 11% fair, 78% good, 6% excellent. Peaches 16% fair, 76% good, 85 excellent. Phenological stages: Cotton squared 93%, 1983 91%, average 93%. Cotton setting bolls: 81%, 1983 70%, 78% average. Corn silked: 98%, 1983 95%, 95% average. Corn soft-dough: 74%, 1983 79%, 80% average. Corn dent: 42%, 1984 49%, 52% average. Corn mature: 14%, 1983 30%, 35% average. Soybeans blooming: 43%, 1983 36%, 42% average. Setting pods: 12%, 1983 14%, 15% average. Harvest: Flue-cured: 22%, 1983 23%, 36% average. Peaches: 72%, 1983 90%, 79% average. Major farm activities: Harvesting, topping and suckering tobacco, spraying and harvesting vegetable crops and fruit crop harvest.

NORTH DAKOTA: A hot week with rain over much of the State. Temperatures were above normal with six stations reporting highs at or above 100°. The south central district had an average temperature of 77.7° last week while the northeastern district averaged 73.1°. Moisture fell at most reporting locations last week. The greatest amounts were reported in the southwestern and south central districts.

High humidity and light showers delayed harvest in some areas, but remainder of State continued short of moisture. Topsoil moisture supplies 80% short or very short. Harvest of barley, oats, winter wheat and rye in full swing. Hard red spring wheat and durum just underway. The percent combined compared to last year and average for winter wheat 55, 55, 43; barley 22, 30, 21; oats 10, 21, 15; hard red spring 3, 12, 9; durum 1, 4, 3. Row crops still in mostly good condition although deteriorating. The percentage of each crop in very good, good, fair and poor condition was: Flax 4, 62, 28, 6; corn 10, 62, 28, 0; sunflower 8, 48, 44, 0; soybeans 31, 61, 8, 0; potatoes 0, 73, 27, 0; and dry beans 0, 58, 38, 4.

OHIO: Precipitation averaged 0.30 to 0.50 in., only about half of normal. Coverage not uniform. Totals over 1.00 in. common in central and southern areas. Temperatures 2 to 3° above normal. Average highs low to mid-80's, lows low to mid 60's.

Soil temperatures 4 inch depth mid to upper 70's. Topsoil moisture 62% short, 38% adequate; 6.0 days suitable for fieldwork. Main activities baling hay and straw, spraying insects and weeds. Corn silked 75% 1984, 80% 1983, 80% average; dough 15% 1984, 20% 1983, 20% average; condition fair to good. Soybeans blooming 85% 1984, 80% 1983, 80% average; setting pods 35% 1984, 35% 1983, 50% average; condition fair to good. Winter wheat harvested 100% 1984, 1983, average. Pasture condition fair.

OKLAHOMA: Temperatures averaged 1° below normal Panhandle to 9° below normal east central. Precipitation averaged 0.01 in. northeast to 1.92 in. east central.

Isolated weekend showers brought much needed relief to parched fields but additional rain needed to boost subsoil moisture supplies. Below normal temperatures kept row crops from severe stress in areas where no rain received. Some northern wheat producers now applying fertilizer to plowed ground. Cotton needs moisture to make a good crop. Heavy bollworm activity reported southwest. Insects infesting fields northern third. Sorghum and livestock

good to fair, cotton and pastures fair condition. Sorghum headed: 60%, 25% 1983, 40% average. Cotton squaring: 90%, 90% 1983, 80% average. Cotton setting bolls: 35%, 25% 1983, 25% average.

OREGON: Thunderstorms scattered light rain over the east throughout the week. Northeast corner recorded 0.25 to 0.67 in. West of Cascades was again dry. Temperatures mostly 2 to 4° above normal statewide.

Winter wheat 38% harvested, 67% in 1983 and 51% on average. Winter wheat harvest started in Willamette Valley, about 6% complete. Grass seed harvest about 3/4 complete, good yields. Spearmint nearly all harvested, peppermint to begin next week. Second hay cut on high elevation fields of east, third cut near Hermiston. Sweet cherry harvest nearly finished, except in Union County. Tart cherries underway. Peaches ripening in Valley and at Hermiston. Filberts look much better than 1983. Most berries all picked. Cranberries look good at coast. Apples and pears being sprayed near Hood River. Potatoes sizing well in central areas and Klamath County. Crop looks good in Malheur County. Norgold harvest full swing around Hermiston/Boardman. Onions and sweet corn looking good in all regions. Snap beans and broccoli harvest continues in west. Livestock in generally good to excellent condition. Ranges and pastures slightly greener than normal for the season. Lower eastern elevations very brown. Tansy ragwort blooming in Willamette Valley.

PENNSYLVANIA: It was a typical summer week with warm humid weather, and scattered showers and thunderstorms. The average temperature of 71° was 1° above normal. Precipitation of 0.85 in. was 0.25 in. above normal.

Days suitable: 6.0. Moisture adequate to surplus. Activities: Clipping pastures; spraying alfalfa stands; making hay; harvesting wheat, oats, sweet corn, peaches, tomatoes, squash. Barley harvest virtually complete, same as last year. Wheat harvest 77% complete, last year 88% complete. Oats 24% harvested, 38% harvested a year ago. Potatoes 5% harvested, last year less than 5% harvested. Corn 44% silked with 6% in dough, last year 48% silked with less than 5% in dough; average 58% silked with 7% in dough. Second crop alfalfa 59% harvested, last year 78% harvested. Third crop alfalfa 6% harvested, last year 13% harvested. Second cutting clo-time 32% complete, last year 27% complete. Quality of hay made good to fair. Feed from pasture mostly average to above average.

PUERTO RICO: Island average rainfall 1.63 in. or 0.13 in. above normal. Highest weekly total 4.23 in. Highest 24-hour total 2.10 in. Temperatures averaged about 81° on coasts and 75 to 74° interior divisions. Mean station temperature ranged from 67.0 to 82.1°. Extremes 96 and 58°.

SOUTH CAROLINA: Wetter than usual. Rains varied from light to locally heavy. Precipitation began to taper off end of period. Temperature below normal through midweek.

Soil moisture adequate to surplus. Days available for fieldwork: 1.6. Corn condition fair to good; 86% dough stage, 77% last year, 90% average; 41% maturing, 24% last year, 51% average. Cotton condition fair to good; 88% setting bolls, 99% last year, 97% average. Soybean condition good; 32% blooming, 36% last year, 50% average; 11% setting pods, 8% last year, 14% average. Tobacco condition good; 53% harvested, 33% last year, 57% average. Peach condition good to excellent; 81% harvested, 80% last year, 84% average. Melon harvest continues, condition fair to good.

SOUTH DAKOTA: Average temperatures ranged from 2 to 10° above normal. Extremes: 105 and 45°. Outside the Black Hills the low was 53°. Precipitation was scattered and generally light with up to 4.25 in. reported in the northwest.

Days suitable for fieldwork: 6.0. Topsoil moisture was short over most of the State with adequate supplies over the southeast, south central, west central and a small portion of the north central part of East River. Critically short supplies were reported through the northwest and a small part of the north central. Grasshoppers continuing to cause problems in west and moving into east. Spring wheat harvested 28%, 1983 37%, average 54%. Sorghum headed 18%, 1983 24%, average 34%. Winter wheat harvested 87%, 1983 87%, average 90%. Corn silked 51%, 1983 53%, average 66%. Corn dough 2%, 1983 5%, average 3%.

TENNESSEE: Cloudy, wet weather dominated the State's weather scene as an upper level disturbance moved from south Ohio to Arkansas. Precipitation levels were generally above normal especially in the eastern sections of the State. Showers spread into the west late in the week. Temperatures averaged below normal and ranged in the low to mid 70's.

Days suitable for fieldwork: 3.5 days. Soil moisture levels: 36% surplus, 56% adequate, 6% short, 1% very short. Corn tasseling 92%, 1983 86%, average 90%; dough 35%, 1983 41%, average 70%; dent 11%, 1983 10%, average 24%. Cotton setting bolls 67%, 1983 54%, average 77%; open bolls 2%, 1983 0%, average 1%. Soybeans blooming 65%, 1983 47%, average 58%; setting pods 15%, 1983 8%, average 25%. Pasture conditions in mostly fair to good shape. Livestock continue in good condition.

TEXAS: High pressure aloft and at surface kept Texas cooler, drier than average for week. Middle week, upper level storm stalled eastern Oklahoma and combined with afternoon heating, moist unstable air to produce scattered showers over Texas. Most precipitation generally light. Rainfall less than normal, except Upper Coast, above normal. Temperatures below normal statewide.

Crops: Drought conditions dominate much State; however, scattered showers privide some relief limited areas. Improved conditions appear where moisture fallen. Harvesting activity steady progress during week, minor delays where showers fell. Cotton good progress Plains, bollworms increase. Irrigated crops excellent growth. Cotton harvest active Rio Grande Valley, Coastal Bend. Scattered opening, defoliation begin soon southern parts Blacklands. High Plains, irrigation active. Some dryland prospects improved recent weeks, excessively dry areas still exist. Bollworms more common, some spraying underway. Current condition 68% of normal, compared with 82% a year ago. Reported conditions 2% excellent; 54% good; 22% fair; and 22% poor. Grain Sorghum normal progress, benefitted scattered showers. Crop maturing northern Blacklands, heading Plains. Greenbugs problem Plains. Some harvest delays along Upper Coast, harvest moved ahead other southern stress, neared completion Valley. Current condition 68% of normal, compared with 73% a year ago. Reported conditions 5% excellent; 39% good; 41% fair; 13%

poor; and 2% failure. Corn harvest moved ahead Blacklands, South central Texss. Yields well below average, some fields used for pasture. Irrigated corn High Plains make excellent progress and looks good. Current condition rated at 69% of normal. About 8% rated excellent; 42% good; 31% fair; 17% poor; and 2% failure. Peanuts receiving recent moisture making excellent progress, in good condition. However, some dryland peanuts South central Texas dry, need rain. Leaf spot Cross Timbers. Soybeans Upper Coast looking good as they reach maturity. Later-planted beans blooming. High Plains, most beans blooming, setting pods, in good condition. Rice harvest increase during week but experienced some delays scattered showers. Grass, weeks widespread problem.

Commercial Vegetables: Rio Grande Valley, land preparations fall planting vegetables continued. Some bell peppers planted. Citrus groves irrigated, pruning continued. San Antonio-Winter Garden, preparations fall planting underway. Limited supplies squash, cucumbers available. East Texas, summer harvest peas, beans, okra, tomatoes, peppers, cucumbers, watermelons continued. Conditions dry, rain needed. Sweetpotatoes progressing slowly, except where water available for irrigation. Trans-Pecos, harvest onions, cantaloupe and cabbage underway. Small supplies corn, okra available. High Plains, potato digging increased available supplies. Onions, cabbage, cucumbers also available. Peaches available North, West Texas, some late varieties harvested South central Texas. Spraying Pecans continued. Rain needed nut development most pecans in water stage. Prospects appear good West Texas, Trans-Pecos, nut set other areas appear light, some loss of nuts occured.

Cotton squaring 91% 1984, 95% 1983, 95% average; setting bolls 53% 1984, 55% 1983, 63% average; open bolls 8% 1984, 4% 1983; 9% average; harvested 5% 1984, 1% 1983, 2% average. Rice headed 100% 1984, 100% 1983, 100% average; Turning color 75% 1984, 85% 1983, 89% average; harvested 12% 1984, 16% 1983, 45% average. Sorghum headed 70% 1984, 73% 1983, 78% average; turning color 60% 1984, 66% 1983, 65% average; mature 53% 1984, 45% 1983, 54% average; harvesting for grain 48% 1984, 36% 1983, 45% average. Harvested corn for grain 28% 1984, 10% 1983, 16% average.

Range and Livestock: Recent scattered showers temporary relief, benefitted some areas State, range, pasture conditions poor to fair. Supplemental feeding continues daily basis help maintain livestock. Hay supplies extremely short, hay cuttings made whereever possible. Avoid expensive feeding, producers cull and sell cattle. Water tanks low, and some ranchers haul water because dry tanks.

UTAH: All reporting stations experienced recurring thunderstorm activity. Accumulated precipitation ranged from moderate to very heavy. Maximum temperatures averaged 4° below normal, ranging from normal to 9° below. Minimums averaged 0.5° above normal, ranging from 4° below to 8° above normal.

Days suitable for fieldwork limited to 5.5. Hot weather accelerated grain maturity but thundershowers hampered hay and grain harvest. Winter wheat 20% harvested, last year 40%. Barley harvest underway, over half the crop ripe. Spring wheat 40% ripe. Second crop hay 45% cut. Tart cherry and apricot harvest ending.

VIRGINIA: Cloudy, cool weather continued through first half of period. Hot humid conditions returned with warming trend second half. Showers and thundershowers statewide entire period. Rainfall heaviest in eastern and southern sections with 2.30 in. average--onlyu 0.60 elsewhere.

Continued shower and thunderstorm activity maintained crops in good to excellent condition. Some areas need dry weather to harvest hay and apply pesticides to crops. Topsoil moisture ratings remained steady at 6% short, 69% adequate, and 25% surplus. Days suitable for fieldwork fell to 3.7 days. Corn rated good to excellent. July weather ideal for corn development. Corn 84% in silk, 83% last year, 87% average. Corn 45% in dough, 52% last year, 56% average. Corn 21% in dent, 24% last year. Soybeans in excellent condition, with no insect problems. Weed control active but difficult due to damp weather. Soybeans 40% in bloom, 38% last year, and 12% setting pods, 14% last year. Tobacco in good to excellent condition. Good yields expected, average quality. Blue mold found in 5 flue-cured tobacco counties. Flue-cured tobacco harvest 9% complete, 11% last year, 16% average. Dark-fire tobacco harvest just beginning. Topping in burley tobacco becoming active. Peanuts in good to excellent condition. Concern over damp weather promoting disease. Spraying active for leafspot and scierotinia blight. Peach harvest 37% complete, 31% last year. Apple harvest starting. Pasture and hay land in good to excellent condition with good growth and quality. Livestock remain in good to excellent condition. Vegetable harvest continues. Rain delayed potato and tomato harvest. Sweet corn in excellent condition.

WASHINGTON: The winter wheat harvest has been moving along rapidly in the southeast. Harvest in some areas of the southeast was delayed two days by rains. Yield prospects continue to look good despite the localized effects of stirpe fungus and the recent rains. Spring wheat harvest has started in the southeast. Harvest of spring barly underway. Corn growth has slowed or become erratic due to the reduced sunshine. Third cutting of alfalfa hay has started in a few areas of the State. The peach harvest continues for some early varieties. Apples and pears growing well. Bartlett pear harvest should start in about two to three weeks. Some hail damage has been reported in southeast. Raspberry harvest essentially complete. Blueberry harvest continues in full swing. Grapes benefitting from warm temperatures, and no disease problems have been reported. The sweet corn harvest progressing well. Broccoli and cauliflower harvest continues. Harvesting of cucumbers, snap beans, summer squash and peppers continues. The tomato harvest expected to be a week later than last year. Norgold potato harvest 10% complete in the southeast. The green pea harvest at its peak in the northwest counties of the State. Pastures in adequate condition for most areas of the State. A few areas reporting short conditions.

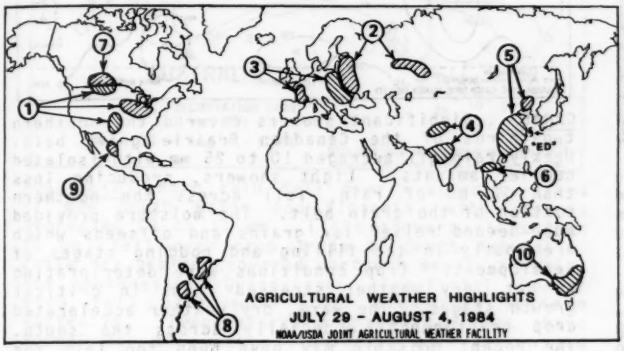
WEST VIRGINIA: Temperatures averaged near normal across the State. Low 45°, high 92°. Rainfall varied, above normal in central area, below normal elsewhere. Range: 0.12 to 1.92 in.

Soil moisture adequate to short. Days suitable for fieldwork averaged 4.3. Main activities: Hay harvesting, gardening, maintenance, pasture clipping. First hay 98% harvested, 84% of normal; 2nd hay 46% harvested, 78% of normal. Barley 99% harvested. Wheat 91% harvested. Oats 45% harvested. Pastures in good to fair condition.

(continued on back-cover)

International Weather and Crop Summary

July 29 to Aug 4



HIGHLIGHTS:

1. UNITED STATES ... Scattered showers did little to help drought in the southern and central Plains, but cooler than normal temperatures are slowing moisture depletion. Beneficial rain helps the eastern Corn Belt, but little or no rain falls in the western section. Warmer than normal tempertures in the northern Plains advance the maturity of small grains and further deplete soil moisture.

2. USSR ... Dry weather favors grain maturation and aids harvesting in the Baltic States, Belorussia, and the Ukraine. In the New Lands, showers continue to benefit spring wheat in the north and east.

3 EUROPE ... Significant showers benefit corn and sunflowers in France. Dry weather aids harvesting in the east.

4. SOUTH ASIA ... Rain is mostly beneficial for cotton and groundnuts in central India. Some flooding is suspected in cotton and rice areas of Pakistan.

5. EASTERN ASIA ... Dry weather favors cotton but rain would benefit late rice. Heavy rain possibly damages corn in the northeast.

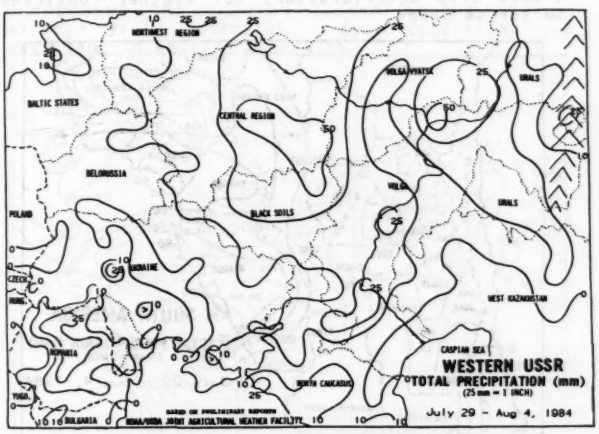
6. SOUTHEAST ASIA ... A drying trend in central Thailand benefits early harvesting but is unfavorable for corn and rice which remain in the reproductive stage.

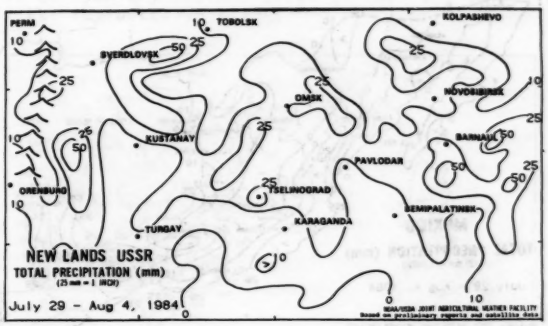
7. CANADA ... Significant rain over the grain belt brings temporary relief from moisture stress, but hot weather during filling and podding accelerates crop development.

8. SOUTH AMERICA ... Wet weather continues in southern Brazil while dry weather prevails in Argentina. Rain in Parana aids Brazil's northern wheat, in the grain filling stage, while moisture is limited in Argentina's western wheat area of Cordoba.

9. MEXICO ... Rain benefits northeastern citrus and sorghum.

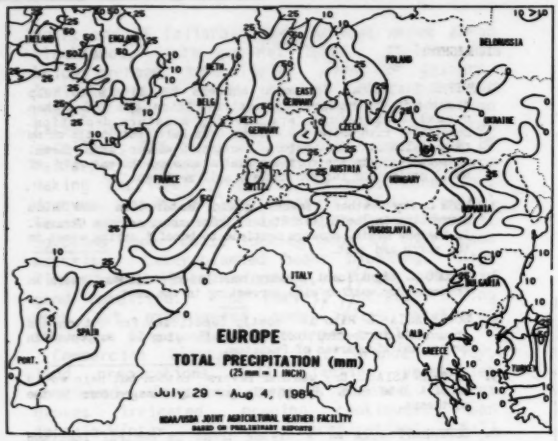
10. AUSTRALIA ... Rain in southeastern Australia aids germination and emergence of recently sown wheat. Western wheat is in very good condition.



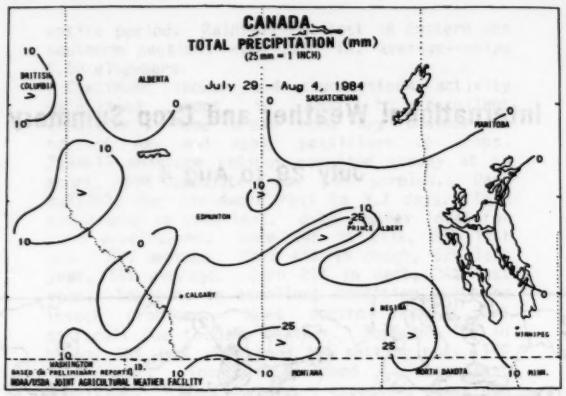


USSR...Mostly dry weather covered the Baltic States, Belorussia, and the Ukraine, favoring grain maturation and aiding harvest activity. However, more rain is needed in the southern and eastern Ukraine for corn in the filling stage. Heavy showers early in the week were followed by unseasonably cool weather in the northern Black Soils and eastern crop areas in the Central Region. The unfavorable weather slowed crop maturity and harvest activity. Further east, significant showers (10 to 25 mm) in the Volga Valley continued to benefit corn and sunflowers, but may have caused some delays in the wheat harvest.

In the New Lands, the first significant rains since mid-June covered spring wheat in the southern Urals and Central Kazakhstan. However, rain was scattered and too late to help maturing wheat which was hurt by earlier hot, dry weather. Beneficial showers (10 to 25 mm) in the northern Urals and West Siberia continued to cover spring wheat in the filling stage. The temperatures this week were near-normal in northern and eastern crop areas, and continued, seasonal weather is needed to promote maturity.


EUROPE
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 29 - Aug 4, 1984
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS

EUROPE...Wet weather (25 to 50 mm) relieved persistent dryness in France, benefiting corn and sunflowers, but likely delayed the winter grain harvest. Further east, late week showers caused harvest delays in West Germany and East Germany, but benefited spring grains in the filling stage. Moderate rains (25 to 50 mm) in England reversed a persistent below-normal precipitation pattern, favoring crops which are still in the filling stage and improving moisture supplies. In eastern Europe, dry weather covered most crop areas, favoring grain maturation and aiding harvest activity. However, temperatures in eastern Europe were below normal, and warmer weather is needed to promote corn maturation.



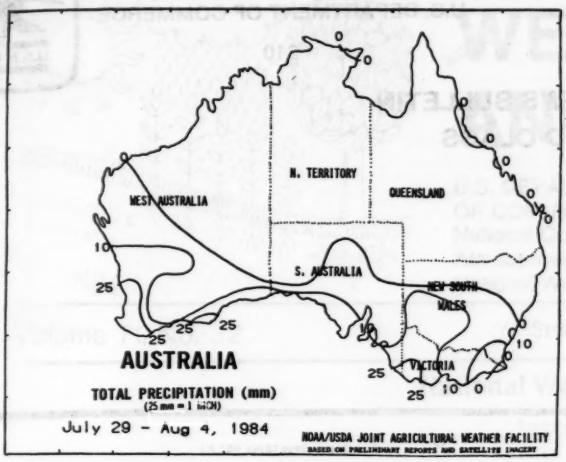
CANADA...Significant showers covered the southern two-thirds of the Canadian Prairie grain belt. Weekly rainfall averaged 10 to 25 mm with isolated heavier amounts. Light showers, producing less than 10 mm of rain, fell across the northern portion of the grain belt. The moisture provided much-needed relief for grains and oilseeds which are mostly in the filling and podding stages of development. Crop conditions were deteriorating as hot, dry weather stressed crops in critical growth stages. The warm, dry weather accelerated crop development, especially across the south. The recent moisture may have been too late for early planted crops. Temperatures remained mostly above average during the week, maintaining a high crop moisture demand. Thus, while recent moisture slowed crop deterioration, hot weather continued to stress crops.

MEXICO
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 29 - Aug 4, 1984
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

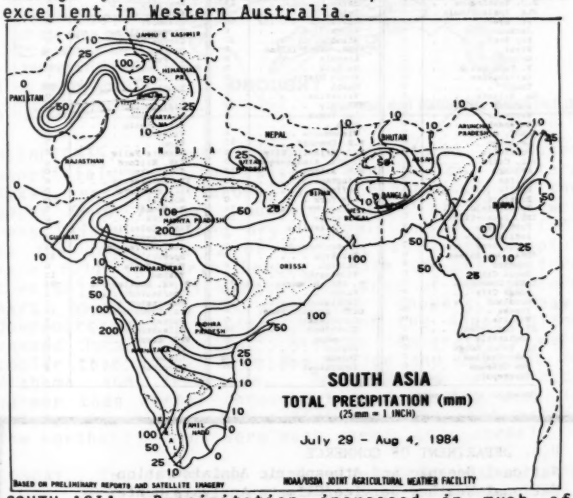
MEXICO...Rain was light over most of the southern Plateau corn belt. Little or no rain fell in the north-central part where the most of the corn is grown. The southern part had 25 to 50 mm of rain. Soil moisture should be adequate in the drier areas so that corn can continue with good growth. Ample rain fell along the east-central coast, helping coffee, citrus, and sugarcane. Light rain covered the northeastern citrus and sorghum areas, but drought continued in the north-central area. Showers covered the northern mountains increasing reservoir levels, but no rain fell in the west coast vegetable areas. Moderate to heavy showers covered most of Central America.

SOUTH AMERICA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 29 - Aug 4, 1984
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

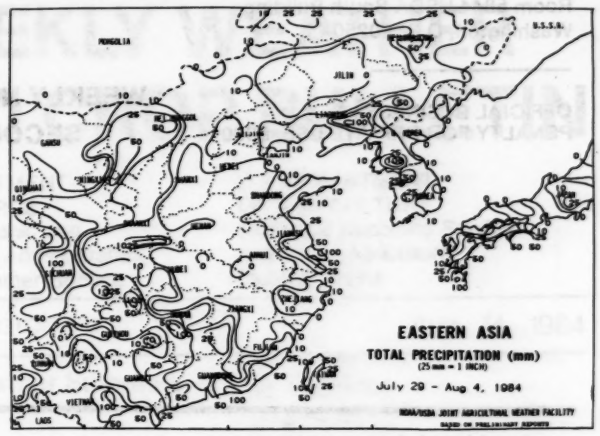
SOUTH AMERICA...Dry weather covered Argentine crop areas while showers fell over most of center-south Brazil. In Brazil, the heaviest rain (25-46 mm) fell over Rio Grande do Sul, Parana, and eastern Sao Paulo. Mostly dry weather prevailed in Brazil's coffee growing areas. The moisture aided wheat, in the grain filling stage, in Parana, but dry weather is needed to promote crop development further south where abundant moisture fell in recent months. In Argentina, dry weather aided late wheat planting. Weekly temperatures averaged a few degrees above the lower threshold level for wheat growth. Moisture supplies are generally adequate for this slow growth period, but limited moisture in the western wheat area of Cordoba may hamper crop development as warm, spring weather returns in upcoming weeks.



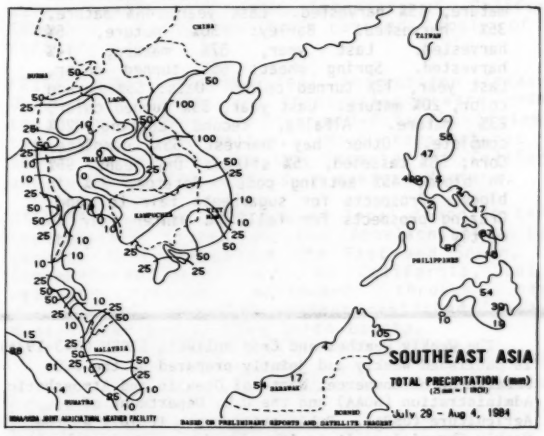
AUSTRALIA...More rain fell over western portions of New South Wales and Victoria, with amounts averaging 13 to 33 mm. Light showers, less than 10 mm, fell over crop areas of South Australia, while dry weather covered northern New South Wales and southeastern Queensland. Beneficial showers also fell over most crop areas of Western Australia. Temperatures averaged somewhat above normal for the week, stimulating germination and emergence of recently sown wheat in southeastern Australia. Because of the very late start of the wheat season in southern New South Wales and Victoria, favorable weather will be needed throughout the growing season to achieve an average yield potential. Crop conditions are excellent in Western Australia.



SOUTH ASIA...Precipitation increased in much of the west and northwest where below-normal rain fell this season. Moderate to heavy rain (25-200 mm) fell in Gujarat and western Madhya Pradesh. The moisture was beneficial for cotton and groundnuts in the vegetative stage, but some flooding was likely in Madhya Pradesh. Isolated storms early in the week in Pakistan and northern India may have caused some flood damage to cotton and rice in the reproductive stages. Below-normal rain continued in Uttar Pradesh, but much of the area is irrigated. Precipitation has persisted from Andhra Pradesh through Bihar and West Bengal, benefiting rice in the vegetative stage. Rain continued along the west coast, maintaining adequate moisture for rice.



EASTERN ASIA...Clear skies in central China were very beneficial for cotton which is nearing the open boll stage. Moisture is adequate through central crop areas where above-normal rain fell the last few weeks. Mostly dry weather remained in the eastern rice areas, favoring early rice harvesting. However, rain would benefit late rice in the vegetative stage. Above-normal temperatures have been depleting soil moisture. Early in the week, Typhoon Ed brought heavy coastal rain to southern Jiangsu. The storm dissipated rapidly and little damage is expected to intermediate rice in the reproductive stage. Dry weather and above-normal temperatures in Hebei and northern Shandong were unfavorable for cotton, corn, and soybeans in the reproductive stages. Unfavorable heavy rain (50 to 100 mm) broke persistent dryness in Liaoning late in the week. The earlier dry weather stressed corn and soybeans in the reproductive stage.



SOUTHEAST ASIA...Below-normal precipitation fell in much of Thailand during the last 3 weeks. The driest area extends east-west through central Thailand. The dry weather has been beneficial for early corn and rice harvesting, but it has been unfavorable for corn and rice in the reproductive stages. Above-normal temperatures increased the moisture demand. Light rain fell in the north but moisture is adequate for rice. Moderate to heavy rain fell throughout the Philippines benefiting rice and corn. Torrential rain (about 400 mm) likely caused flooding along the west coast of central Luzon.

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WEEKLY NEWS BULLETIN
SECOND CLASS

(continued from p. 24)

WISCONSIN: Week began mild, dry. Turned hot, humid midwek; highs upper 80's, mid 90's. Scattered showers, thunderstorms mostly northern and central counties on 2nd and 3rd. Highest temperature 96° LaFarge. Lowest, 50° Superior.

Days suitable fieldwork: 7.0. Soil moisture 49% dry, 40% adequate, 11% wet. Crop progress, corn acreage silked 72%, last year 63%, average 68%. Acreage in dough stage 14%, last year 9%, average not available. Oats harvested, 33% compared to 20% for last year and 24% average. Second cutting of hay, 67% complete, 57% last year, 53% average. Pasture condition reported at 76% of normal.

WYOMING: Above normal temperatures. Nearly all areas above normal precipitation.

Topsoil moisture adequate 64% State. Days suitable for fieldwork: 6.0. Winter wheat: 70% mature, 15% harvested. Last year, 48% mature, 35% harvested. Barley: 30% mature, 5% harvested. Last year, 37% mature, 14% harvested. Spring wheat: 55% turned color. Last year, 13% turned color. Oats: 55% turned color, 20% mature. Last year, 39% turned color, 23% mature. Alfalfa, second cutting 20% complete. Other hay harvest 55% complete. Corn; 55% tasseled, 25% silked. Dry beans: 95% in bloom, 45% setting pods. Potatoes 90% in bloom. Prospects for sugarbeets fair to good. Grazing prospects for fall and winter fair to mostly good.

Heating Degree Days (Base 65° F.)

July 1984

ALA. Birmingham	0	MAINE, Caribou	38	OKLA. Okla. City	0
Mobile	0	Portland	11	Tulsa	0
Montgomery	0	MD. Baltimore	0	OREG. Astoria	160
ALASKA, Anchorage	139	MASS. Boston	3	Burns	23
Barrow	738	Chatham	14	Medford	0
Fairbanks	124	MICH. Alpena	42	Pendleton	4
Nome	423	Detroit	11	Portland	9
ARIZ. Flagstaff	21	Flint	14	Salem	44
Phoenix	0	Grand Rapids	16	PA. Allentown	0
Tucson	0	Houghton Lake	42	Erie	11
Winslow	0	Lansing	21	Harrisburg	0
Yuma	0	Marquette	71	Philadelphia	0
ARK. Fort Smith	0	S. Ste. Marie	82	Pittsburgh	12
Little Rock	0	MINN. Duluth	40	Scranton	7
CALIF. Bakersfield	0	Internatl Falls	50	R.I. Providence	1
Eureka	222	Minneapolis	5	S.C. Charleston	0
Fresno	0	Rochester	23	Columbia	0
Los Angeles	0	St. Cloud	16	Greenville	0
Red Bluff	0	MISS. Jackson	0	S. DAK. Aberdeen	12
Stockton	0	Meridian	0	Huron	5
San Diego	0	MO. Columbia	0	Rapid City	0
San Francisco	43	Kansas City	0	Sioux Falls	2
COLO. Denver	0	St. Louis	0	TENN. Chattanooga	0
Grand Junction	0	Springfield	0	Knoxville	0
Pueblo	0	MONT. Billings	13	Memphis	0
CONN. Bridgeport	0	Glasgow	0	Nashville	0
Hartford	3	Great Falls	12	TEX. Abilene	0
D.C. Washington	0	Havre	10	Amarillo	0
FLA. Apalachicola	0	Helena	2	Austin	0
Ft. Myers	0	Kalispell	60	Beaumont	0
Jacksonville	0	Miles City	0	Brownsville	0
Key West	0	Missoula	37	Corpus Christi	0
Miami	0	NEBR. Grand Island	0	Del Rio	0
Orlando	0	Lincoln	0	El Paso	0
W. Palm Beach	0	Norfolk	0	Fort Worth	0
Tallahassee	0	North Platte	0	Galveston	0
Tampa	0	Omaha	0	Houston	0
GA. Atlanta	0	Valentine	0	Lubbock	0
Augusta	0	NEV. Ely	20	Midland	0
Macon	0	Las Vegas	0	San Angelo	0
Savannah	0	Reno	0	San Antonio	0
IDAHO, Boise	0	Winnemucca	0	Victoria	0
Lewiston	0	N.H. Concord	19	Waco	0
Pocatello	5	N.J. Atlantic City	0	Wichita Falls	0
ILL. Cairo	0	N. MEX. Albuquerque	0	UTAH, Milford	0
Chicago	19	N.Y. Albany	12	Salt Lake City	0
Moline	3	Binghamton	19	VT. Burlington	6
Peoria	1	Buffalo	11	VA. Lynchburg	0
Rockford	9	New York	0	Norfolk	0
Springfield	0	Rochester	14	Richmond	0
IND. Evansville	0	Syracuse	16	Roanoke	0
Fort Wayne	4	N.C. Asheville	1	WASH. Colville	0
Indianapolis	1	Charlotte	0	Quillayute	199
South Bend	7	Greensboro	0	Seattle-Tacoma	54
IOWA, Des Moines	0	Hatteras	0	Spokane	21
Dubuque	8	Raleigh	0	Walla Walla	0
Sioux City	0	Wilmington	0	Yakima	13
KANS. Concordia	0	N. DAK. Bismarck	17	W. VA. Beckley	24
Dodge City	0	Fargo	15	Charleston	1
Goodland	0	Williston	0	Huntington	1
Topeka	0	OHIO. Akron-Canton	7	WIS. Green Bay	18
Wichita	0	Cincinnati	0	Madison	9
KY. Lexington	2	Cleveland	16	Milwaukee	3
Louisville	0	Columbus	6	WYO. Casper	0
LA. Baton Rouge	0	Dayton	7	Cheyenne	0
Lake Charles	0	Toledo	11	Lander	0
New Orleans	0	Youngstown	16	Sheridan	7
Shreveport	0				

Based on 1951-80 normals.

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